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Original Articles.

PNEUMONIA, A SYNOPTIC STUDY.

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"IN pneumonias which affect whole neighborhoods in the spring of the year, bleeding is the universal remedy."

"I had been accustomed to raising a weak and low pulse in pneumony, by means of blood-letting." — Rush.

The above lines written more than one hundred years ago by the celebrated Dr. Benjamin Rush afford us valuable information in respect to the annual recurrence of this grave disorder at that period, as well as to the treatment then in vogue, and which continued almost unchanged, until after the middle of the present century, when Latham spoke of bleeding as "the counteracting remedy" for pneumonia in its earliest stage.

This remedial operation was one of the consequences of the therapeutic revolution inaugurated by the immortal Sydenham, who, during the latter part of the seventeenth century, adopted antiphlogistic treatment in combating pyrexial diseases, an innovation which has rightly conferred on him, notwithstanding his excessive sanguineous deflections, the title of one of the greatest medical reformers of his or any other age.

But while Rush, with unswerving fidelity to the dogma he promulgated, rigidly and conscientiously enforced the "*saignée coup sur coup*" method of Bouilaud not only in pneumonia, but likewise in apoplexy, and also in the epidemic of yellow fever which prevailed in Philadelphia during the summer and autumn

of 1793, in his own case, in his immediate family and amongst his intimate friends and patients; many of his professional contemporaries demurred at such drastic measures, doubting the expediency of unrestricted bleeding in the fevers and inflammatory diseases, where it was then so widely employed, and hostile feelings and actions were thereby engendered on either side, together with a stubborn adherence to opinion, quite at variance with the unanimity one would expect to find subsisting between scientific men when confronted with the difficulties and dangers of that memorable occasion.

It is curious, in reviewing the medical literature of the past, to note the change, whether from constitutional or other causes, whether from "the prevailing medical constitution" of Rousseau, which, he affirms, "has an immense influence over the action of remedies," forced as it were upon physicians, in the management of pneumonic inflammations, within the last few decades, inculcating as it does an instructive lesson to those upon whom devolves the serious responsibility of guiding a helpless human being through the perils incident to its progress and termination, be it for good or ill.

Pneumonia "peripneumonia vera, the simple legitimate pneumonia" of Rousseau, the "primary pneumonia" of Grisolle, is an acute inflammation of the substance of the lung in the adult, known also as croupous and lobar pneumonia, a morbid condition doubtless the result of quite different general pathogenic states of the system, in all of which, however, the predominating lesion is an inflammatory process, of greater or less extent, of the parenchyma of those organs.

Eminent authorities agree that the disease under consideration should, from its clinical phenomena, be

classified rather with the synochal fevers than considered a localized idiopathic phlogosis; and Juergensen, coinciding in this view, goes further, and states explicitly that, while not contagious, "croupous pneumonia belongs to the group of infectious diseases."

Whatever may be the diversity of sentiment regarding the latter opinion, there is almost none at present, as to all forms of this disease being merely epiphemona of a specific pyrexial disorder, the knowledge of which brings the modern pathologist and diagnostician in touch with his remote professional predecessors, who named it peripneumonic fever before the stethoscope had exposed the thoracic cavity to scientific observation, or the classical therapeutics of the present era had superseded the empiricism upon which it is based; and who, guarded by clinical traditions, which, after having become obsolescent, are now revived as orthodox, were nearer right in their pathological deductions than the disciples of the intermediate schools.

"Croupous pneumonia belongs to the permanent diseases, the endemic class, it recurs in annual cycles." —(Juergensen.)

The pertinence of the foregoing axiom of the erudite professor and director of the Tuebingen Poly-clinic is unquestioned, and is tantamount to that of Rush, who practically announced the same idea long ago, it being well-known that sporadic cases occur at all seasons of the year, with periodical recrudescence outbreaks about the time of the vernal equinox, during the cold, blustering weather of the early spring; and, although according to custom alluded to as a primary disease, it is now really considered a concomitant only of other morbid subjective conditions.

The theory that the salient local lesion is subordinate to the dominant pyrexial invasion, and does not cause the hyperthermic perturbations with which it co-exists, is rendered probable by the definite course it runs, by the almost invariable *prodromi stadii invasionis*, lasting from twenty-four to seventy-two hours; by the critical phenomena which usher in the period of convalescence; by the different character of different epidemics, when it prevails in that manner, some being uniformly mild, and others unusually severe; by the occasional continuation of the illness after resolution of the pulmonary phlegmasia, as well as by the subsidence of the constitutional symptoms before that stage is reached; by the fact that it cannot be produced artificially, "that the most intense hyperemia by itself cannot occasion croupous inflammation," Niemeyer also, although "section of the vagi produces hepatization of the lung, it is not the hepatization of croupous pneumonia," and, finally, from the circumstance that inflammations consecutive to traumatic injuries of the lungs are by no means identical with those resulting from systemic causes; the phenomena of the latter placing them more correctly in the category of the specific fevers, although dissimilar inasmuch as they are usually non-contagious; and, if it is actually a secondary, but most prominent phase of a specific febrile condition, should not the technical name of the latter clearly denote that state? Enteric fever has its pathognomonic glandulæ aggregatæ, rheumatic fever has its characteristic synovitis, and pneumonic fever has its obvious and dangerous thoracic lesion, which, assuming it to be a local manifestation only of a general disorder, in the course of which it is developed, the effect and not the cause of the pyrexia it accompanies, might we ask, without impropriety, if the popular nomenclature is not erroneous and misleading? And if its former name, pneumonic or peripneumonic fever, as designating

more exactly its pathology as understood to-day, might not with advantage be substituted for the misnomer pneumonia, signifying as it does a general indefinite inflammation of the thoracic viscera?

The evolution of pneumonia, in the light of its morbid anatomy, has been artificially divided into three recognized stages, viz.:

1. Engorgement;
2. Red hepatization;
3. Gray hepatization,

terminating, when the issue is favorable, in resolution; some pathologists considering the third stage as already one of commencing resolution.

In the first stage, or that of inflammatory hyperæmia, the portion of the lung affected is actively congested, during which diadepsis of the leucocytes and effusion of the liquor sanguinus and red corpuscles into the pulmonary vesicles takes place; it is of a dark-red color; more dense and heavy, containing less air, and therefore less crepitant upon pressure than normal, the pleximeter revealing superficial resonance; somewhat tympanitic; ephemeral in duration; becoming rapidly dull as the infiltrating exudation coagulates, occluding completely the tubes and air-cells which constitute each pulmonary lobule. Auscultation, at the time, before consolidation, elicits the diagnostic sound of fine crepitation—the "crepitant râle" of Laennec, which has been compared by Williams to that produced by rubbing the hairs of the head between the fingers, in close proximity to the ear, and which is supposed to be caused by the expansion of the air-cells during inspiration when somewhat adherent from their viscid contents.

After from twenty-four to forty-eight hours, the second stage, or that of red hepatization, follows. The effused serum and proliferating cells having now become coagulated, the crepitant rhonchus is no longer heard at its original site, though still audible about the borders of the consolidated tissues, and the normal vesicular structure, having assumed a homogeneous density, like the liver, the respiratory murmur is totally annulled, and in lieu of it we detect bronchial respiration, increased vocal fremitus, and later bronchophony, with perfectly flat, complete dullness upon percussion—"tanquam percussi fermoris."

The damaged organ is now so heavy that it sinks in water by its own weight; and when a considerable portion of it is involved, complete expansion of the chest on the affected side is impracticable, the intercostal spaces upon inspection being found distended, yet not obliterated as in pleurisy, only somewhat less depressed than on the corresponding healthy side of the thorax.

In this connection I may be permitted to state that, although we may hear a great deal of pleuro-pneumonia—a comparatively rare disease in the country—amongst young and inexperienced practitioners, the pleurisy which usually accompanies cases of acute pneumonia is rather a pneumo-pleurisy, slight and indistinguishable by the physical phenomena which pertain to it when existing alone, the pulmonary pleural tunic alone being inflamed immediately contiguous to the affected viscus; and even were the pleura costalis simultaneously and extensively involved, effusion to any great extent into the pleural sac would be hindered by the expanded and rigid lung, occupying all the vacant space within the thoracic cavity immediately hepatization has taken place; this, together with the immobility of the respiratory muscles, restrained by pain, in the earliest stage, rendering the friction sound which might then be

present inaudible. Therefore, I submit, the term referred to should be restricted to those cases where the *conditio sine qua non* is palpable, enabling one to make the diagnosis of the more prominent clinical symptoms of pleuritic inflammation indubitable.

The pyrexia pursuing its natural course, the morbid processes advance until the third stage, that of gray hepatization, is reached, the pectoral sounds, identical with those of the second stage, remaining unchanged, until resolution—the breaking down, fatty degeneration, and liquefaction of the exudation—commences, bringing with it (the bronchioles and pulmonary vesicles have become in a considerable degree permeable to the respiration) the welcome sub crepitant rhonchus, the “crepitans redux” of Laennec, resonance upon percussion, at first slight, rapidly becoming more pronounced, disappearance of bronchophony and bronchial respiration, with a gradual return of the normal respiratory murmurs.

This metamorphosis is largely due to interstitial absorption, the expectorated sputa being insufficient to account, alone, for the removal of the organic infiltrations, which, in certain instances, happens with unexpected rapidity; generally, however, several weeks elapse before all the signs of engorgement entirely pass away; again, sometimes they vanish so abruptly, as in other idiopathic inflammations, occasionally during a single day, that the term resolution is inadequate to explain the *modus operandi* of their departure; hence the title “delitescence,” conferred upon it by Broussais.

The physical phenomena, briefly outlined above, may be absent or unrecognized during the course of pneumonic fever, when the base or central portion of the lung is involved; and so difficult is it when thus situated, at times to locate, that when detected several days may have elapsed, under the observation of an accomplished clinician, before an infallible diagnosis of the exact position of the lesion can be made.

The peculiar rapid absorption of the coagulated sero-fibrous exudation referred to, reminds one of a pathological error until recently prevalent and generally accepted as true, in which the nature of gray hepatization was held to be a form of suppuration, instead of—assuming resolution to have commenced—a conservative vital metamorphosis, which, completed, leaves the delicate primordial textures of the pulmonary alveoli and infundibuli practically uninjured, with their function and capacity unimpaired.

Considerable ingenuity has been exhibited in explaining upon the pyogenic theory, why abscess of the lung as a sequel of pneumonitis was so rare. Watson, in his incomparable lectures, in discussing this matter, speaks of the “very remarkable circumstance, and one which the researches of modern times have brought to light, that in the lung, inflammation going on to suppuration, does not lead to circumscribed abscess, as it does when it affects the areolar tissue or the parenchymatous tissue in other parts of the body,” and immediately preceding these lines, he says: “The third stage, in fact, consists in diffused suppuration of the pulmonary textures.” But abscess of the lung, resulting from acute pneumonia, being, as we know, and as he well knew, such a rare occurrence, he sought some rational explanation of its infrequency, which he advanced, but which was necessarily sophistical, predicated, as it was, on the theory that the third stage of the disease he was describing consisted pathologically in “diffused suppuration.”

This tendency to resolution and not to suppuration, after the inflammation has reached a certain point, confirms the view that the local phlogosis is,

sui generis, an integrant only of a specific constitutional fever, and not, *per se*, the cause of the illness.

But in place of this salutary resolution, true suppuration, purulent infiltration of the pulmonary parenchyma, may, and sometimes unfortunately does, succeed the stage of gray hepatization, and abscess also may be a sequel of pulmonic inflammations, and then in the expectorated pus, the débris of the histological elements of lung tissue, “elastic fibers,” are disclosed by the microscope.

A singular circumstance, and one that I do not know of having been satisfactorily explained, met with when consolidation of the lung is complete, is a total absence of the chloride of sodium from the urine of the patient, as shown by the nitrate of silver test, and which, resolution accomplished, returns and responds to that chemical reaction. This anomaly is said to attend the pyrexial access in other disorders, but I cannot think the reason a valid one, which ascribes the disappearance and temporary withdrawal of the salt to its non-ingestion in the aliment, and elimination by the emunctories in the sweat and other secretions, as that would not account for its presence and concentration in the inflamed area, as demonstrated by Beale.

The subjective and objective symptoms which characterize pneumonia can hardly be mistaken. They announce as distinctly as if the word were uttered, the name of the disease. Its premonitions are not dissimilar from those of many other severe affections, consisting of restless, disturbed sleep, lassitude, anorexia, headache, feverish chilliness, thirst and low spirits. After a variable interval of from one to three days, the patient is prostrated by an extreme prolonged rigor, usually the only one during the attack, succeeded by high febrile reaction—a subjective condition, as the thermometer shows a fervid temperature when the patient is shivering with cold. Acute unilateral costalgia, “stitch in the side,” is a prominent and very distressing feature in the early stage, compelling an effort to refrain from coughing, as well as from expanding the chest in the act of breathing, which is hurried and oppressed, concomitant dyspnea being usually present, with nausea and sometimes vomiting. The countenance is anxious, the face dusky and flushed, especially over the malar bones, an objective sign much valued; in fact, considered conclusive in the matter of diagnosis, by the ancient practitioner. There is a constant hacking cough, dry and irritating during the first day, followed by scanty glairy, very viscid sputa, speedily becoming sanguinolent, tinged with blood, giving it the appearance known as “rusty” expectoration.

This exceedingly tenacious, rust-colored sputum, is characteristic of acute pneumonia, and is relied upon by many physicians to differentiate and definitely determine, in other words, to diagnosticate the exact nature of the intra-thoracic lesion; and a most valuable sign it is, as in no other acute or chronic disease of the lungs does it appear, while in few other obscure affections do we have a guide so infallible to direct us in our pathological discriminations. So sticky and adhesive is this viscous phlegm, that the vessel containing it in considerable quantity may be inverted and rudely shaken without detaching it from its inner surface, and when small it coats the receptacle like varnish or glue; for this reason, it is ejected from the throat and mouth with extreme difficulty, sometimes having to be wiped away with a handkerchief or cloth.

The pyrexia is now established, with, in severe cases, a high bodily temperature, 102° to 105° F.

Commencing when the initial chill ceases, it continues with slight morning remissions and evening exacerbations throughout the illness; this peculiar thermal pneumonia is associated usually with mild nocturnal delirium, restlessness and inability to sleep. The thirst, headache and complete prostration continue throughout the attack and the radial pulse beats rapidly, and although generally from ninety to one hundred and twenty per minute, may reach one hundred and forty, or even one hundred and sixty pulsations, and from having been at first full and strong, may become soft, small and feeble, irregular and dirotous. This is a grave condition and the patient is in imminent peril.

Delirium, which in mild cases is slight or absent, may be so active and violent as to mask completely the pulmonary disorder, simulating a cerebral more than a thoracic lesion. I remember an instance of a youth about eighteen years of age, prostrated by this disease, where the delirium was the most prominent feature throughout the attack, continuing uninterruptedly day and night for about a week.

The bowels are constipated, and the tongue loaded with a whitish fur, becoming dark and dry as the vital forces are exhausted and impending danger hovers near.

These phenomena gradually increasing in severity, may continue a week or longer, when, if recovery ensues, which is the common termination in young, robust subjects, there is a sudden amelioration of all the symptoms; the fever abruptly ceasing, depresses the bodily temperature, sometimes even one or two degrees below the normal; "arterial tension diminishes," and the pulse becomes natural in frequency and force; free perspiration bathes the surface of the body; there is increased urinary secretion, with a return of the alkaline chlorides; loose, copious expectoration; the tongue clears; bowels become regular, and appetite returns together with refreshing sleep, and complete restoration to health follows a short and agreeable period of convalescence.

Frequently, however, as with other diseases, owing to adverse circumstances or individual idiosyncrasies, recovery is much more gradual, being retarded by various causes, and weeks may elapse with many disappointments, before that desirable end is fully attained.

But when otherwise, when a fatal termination supervenes, "the fever persists without tendency to defervescence; sometimes, however, an attempt at crisis is observed, but the temperature immediately rises again. The pulse becomes small, unequal, of an extreme frequency; the respiration is accelerated, the expectoration is suppressed, or else becomes more abundant, taking on the prune juice aspect; it is fluid,ropy, dark and covered in the spittoon with a frothy sputum. The visage is cyanosed with violet spots; the tongue becomes dry and black; the facies Hippocratica is apparent; the respiration is tracheal; the skin is covered with a viscous sweat, and the patient succumbs sometimes in a collapse with a temperature below the normal; sometimes with a hyperpyretic temperature, the thermometer marking 106° to 107.5° F.; Wunderlich has even witnessed a temperature of 109.2° F." (*Germain Sée.*)

Pneumonia is an exceedingly prevalent and fatal disease, no particular climate or latitude being exempt from it, but as Rush intimated, the season of the year has an undoubted influence in its production, it being much more frequently met with in the latter part of the winter and early spring than during the rest of the year. Douglas Powell states that

more than twenty-four thousand persons die of it annually in England and Wales. It has its peculiarities; the right lung is affected twice as often as the left, the lower lobes much more frequently than the upper, and when both lungs are involved, it is unusual for them to be attacked simultaneously, the inflammation in such instances being usually of a migratory character, traveling from one side of the thorax to the other. Its average duration is about a fortnight. Women are less obnoxious to it than men, but it is a more fatal affection with the former than the latter. No age is safe from the approach of this unwelcome visitant, but those of middle and advanced life are particularly liable to suffer from its coming.

"There are two distinct kinds of pneumonia: one frank, due almost always to the action of cold; the other infectious, caused by a specific morbid agent."

Germain Sée.

Although scarcely to be expected, the etiology of pneumonia is somewhat obscure, and there is considerable diversity of opinion amongst authors as to its predisposing and exciting causes. Its parasitic origin is at present a *questio vexata* with bacteriologists, and while the pneumococcus of Friedländer as an 'etiological factor in the "primary" variety of the disease has its advocates among distinguished scientists, the consensus of medical opinion, as it stands at present, is such as to require an allusion to it only in this paper.

Individual predisposition is, however, indispensable to its development, let the exciting cause be what it may; as the eminent physician to the Hotel Dieu has said, "primary" pneumonia is almost invariably due somehow to the action of cold, but whether that agency may produce pneumonia, pleurisy, rheumatism or other of the pyrexiae, depends upon the temporary "medical constitution" of the individual. There is also the epidemic influence, where it prevails in that manner, and as is well known, one attack predisposes to another. Then, also, the "epidemic constitution" may be developed and the disease extend indefinitely; it now assumes the infectious form, but never in the salubrious atmosphere of the country, the ochlesis of congested populations in metropolitan cities and crowded hospitals, being largely responsible for its ravages under these circumstances.

The sporadic cases met with in general practice arise almost always from some gross carelessness or imprudence on the part of the patient, the symptoms which precede the attack being frequently ascribed to prolonged exposure to damp and cold; or to a sudden chilling of the body when overheated or fatigued; or to sleeping in damp sheets; to wet feet; to standing on the bare ground during inclement weather; frequently with the head uncovered, as at funerals—a potent cause of lung diseases. Anything that depresses the system may invite an attack: poverty, insufficient food, unhygienic surroundings, grief, care and anxiety, may render those predisposed more liable to it, during the season of great and sudden meteorological vicissitudes and changes of temperature, natural to our climate, and although sometimes there is said to be no known exciting cause, merely an accidental chill, such instances in my experience are rare. Those of advanced years and the subjects of chronic morbid conditions, are peculiarly prone to pneumonia, and it not infrequently supervenes during the course of other acute diseases, as in the case of the exanthemata, exemplifying "when it impresses on the intercurrent disease such modifications that

the physiognomy of it is altered or completely transformed" the "secondary pneumonia" of Grisolle. When it develops pending the adynamic, so-called typhoid, fevers, the cause is toxicæmia, the blood is poisoned.

The prophylaxis of pneumonia, from the consideration of its causation, resolves itself into the adoption of those measures known to improve the general health and strength of the members of each community; all unnecessary and imprudent exposure and undue fatigue are to be avoided; an equable frame of mind cultivated; warm clothing; sufficient sleep; nutritious food; avoidance, if practicable, of the dangerous winds of winter and early spring, especially when the disease is endemic, and as out-of-door occupations are said to be less provocative of it than indoor sedentary pursuits, regular exercise in the open air is to be recommended. The function of the skin should be sedulously attended to; cold bathing when we can induce our clients to practice it, winter and summer, is a powerful prophylactic, and unmixed, pure woolen underwear, frequently changed, strong warm shoes with thick soles for the feet, and proper headgear should always be worn. The tonsorial subserviency to the demands of fashion, now short hair is the mode, should be entirely ignored in cold weather, and beds should be well supplied with coverings of non-conducting heat materials, enough to retain the animal caloric during the hours of sleep; and finally, the ordinary well-known canons of individual and domestic hygiene, are, if strictly followed, powerful to defend the system against this insidious and mortal foe.

As regards diagnosis, pneumonia is not readily mistaken for any other disorder, pleurisy and acute phthisis being the only pyrexiae with which it is likely to be confounded. The ancients included all sudden and violent inflammatory diseases of the chest under the general term, pneumonia, which means, as we have stated, comprehensively, a disease of the lungs, and it was not until it was isolated from cognate pathological companionship by the researches of Laennec, that it was proved to be, etymologically speaking, an idiopathic lesion. Before his epoch pneumonia and pleurisy were considered modifications of one and the same disease; but now, enlightened by his profound searching investigations, aided by the thermometer, even the *Æsculapian* neophyte promptly finds the clue, and with ease unravels the tangled skein of occult phenomena, quickly and surely discriminating between heterogeneous subjective conditions, where his remote predecessors, even when aided by experience and practical observation, blundered in hopeless confusion, amidst their indistinguishable signs.

In the initial stage only would an error in diagnosis be liable to occur; after the lapse of forty-eight hours, the second stage, that of consolidation being reached, the signs become unequivocal, and when the inflammation is central or deep seated, or in the latent form alone can a careful examination fail to detect its distinctive features.

Before this, during the former period, the temperature by itself will generally confirm the diagnosis; a rapidly rising, high thermometric range, 102° or 103° F., commencing immediately the severe and prolonged rigor subsides, and continuing without abatement, denoting pneumonia; if under 101° F., it is probably pleurisy, and now "if the ear catches a friction sound," it is "a sure sign that the inflammation has involved the pleura," (Da Costa); this and the physical signs of pneumonia already detailed, together with the respiratory ataxia, "the increased frequency of respiration and the alteration of pulse respiration rate,"

(Walshe); and when in the latter disease, after effusion into the pleural sac, there is flatness on percussion, displacement of the heart, absent bronchophony replaced by ægophony, ocular inspection of thorax and intercostal spaces discovering evidence of internal distension, there is no longer any room for doubt, and the lesion present is fully recognized; enough proof having been found to distinguish the two diseases, one from the other.

When acute phthisis may have invaded the pulmonary textures, the portion of the lung affected, the pyrexial irregularity, chronic course, hereditary predisposition, and individual characteristics, can hardly mislead a careful observer, whose diagnosis would be irrefragably confirmed, should the microscope display the bacillus tuberculosis of Koch to his trained vision.

"The natural course of pneumonia is more decidedly cyclical than that of almost any other disease, and left to itself, in a vigorous patient, if uncomplicated, and of moderate intensity, it almost always ends in recovery." (Niemeyer.)

As stated above, the prognosis is usually favorable; when previously healthy, young and middle aged subjects are stricken with "primary pneumonia," they generally, when not improperly treated, recover; but even here the extent of the organ involved, and especially should both lungs be affected, double pneumonia, the case becomes much more serious, and anxiety as to the ultimate result is awakened; also, when those exhausted by excesses and irregularities of every kind, or the constitutionally infirm are attacked, the outlook is unpromising. Death, as Douglas Powell has shown in his statistics, will always claim a certain proportion of victims. Pneumonia is an exceedingly dangerous disease when engrafted on the chronic alcoholic cachexia, and advanced years, also intractable organic disease, predispose greatly to an unfavorable termination; in fact, the two preceding conditions may be considered almost identical. How many old persons go their daily rounds, apparently well, who have not one healthy organ in their bodies. They get along comfortably enough, as long as they remain—if the word can be applied to them—well, but interorganic acquired compensation once disturbed, if one organ defaults ever so little, or for ever so short a time, the artificial credit that was apparent, and not real, is destroyed, and constitutional bankruptcy and collapse at once ensue. Old age has been called "one long disease," if this be true, pneumonia in attacking the dozens of our streets and houses, really supervenes upon a chronic disorder, and is then doubly one of the most fatal affections the doctor is called upon to treat. The late Dr. W. W. Gerhard, in this connection, when I was a member of his class, nearly forty years ago, was wont to use the quaint expression, "pneumonia lets out more life in old persons than any other disease."

Among the individual symptoms, the pulse and temperature are of moment in making our forecast in pneumonia. "An elevation of temperature above 106° F., an increase in the frequency of the pulse above one hundred and twenty beats, render the prognosis bad," (Niemeyer). The character of the pulse also is important, great irregularity and persistent dichrotism augur of ill. Delirium in the early stages in young subjects is unimportant, but when it is prominent in the old, or during the latter part of an attack, in those not past their prime, it is of sinister significance, and "typhoid," adynamic signs, dry brown tongue, prune juice expectoration, subulatus tenditum, low muttering delirium, and tendency to coma, coupled with suppression of expectoration,

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and "the rattles,"—the picture so vividly lined by the pencil of Germain Sée—point to inevitable and speedy dissolution.

"It should never be forgotten that pneumonia is a self-limited disease; that a comparison of various active and perturbative modes of treating it, proves them to be all very much upon an equality as regards their curative power; and that the plan which has been attended with least mortality is, on the whole, one of pure expectation."—(Stillé.)

We have here submitted to our consideration, the unqualified utterance of an eminent contemporary teacher, as to the therapeutics of pneumonia, as well as at the beginning of this paper, the obsolete dogma and creed long ago announced by the celebrated Rush, and, so utterly opposed are they in precept, one to the other, that contrasting these, we are compelled to ask the reason for their wide divergence upon this most important matter. The disease is unchanged, its clinical pathology is practically the same to day as it was a century ago, but how different its treatment, in almost every particular totally and radically unlike that of the past. Now if its symptomatology and natural history have undergone no marked modification or change, where must we look for this wide dissimilarity of sentiment as regards its management? It must be sought for elsewhere, and the query arises, Is it not to be found in the changed "medical constitution" of those we are summoned to attend, controlling the action of the aetiological factor, and producing subjective conditions, which, with mute but eloquent insistence have claimed the attention of the senses, and wrought the conservation shown in the discrepancy of judgment and opinion, of these illustrious writers of ancient and modern times.

It has been affirmed by competent observers, since the epidemic of Asiatic cholera in 1832, that the character of pyrexial diseases has materially changed; that they have assumed an asthenic type, and where formerly evacuant and depressing remedies were relied upon to cure, since that period, the effect of treatment upon their essential phenomena as exhibited to clinical observation, has gradually inclined practitioners toward opposite measures; a conservative analepsis, nutritious and stimulating, having in a great degree superseded the exhausting depletions of former times, the purely expectant plan being considered by many as preferable to any medication; and from personal experience, as well as guided by the wise, admonitory words of that master of medical lore quoted above, I am inclined to think that in uncomplicated acute pneumonia, as met with in the young and middle-aged, the classical adage *optima medicina nulla medicina* might well be adopted by whomsoever may be called upon to enter the chamber it has tenanted, in the capacity either of a physician or a nurse.

There are numerous cases, however, which imperatively demand our professional aid, and in their management we should never lose sight of the fact that pneumonia is a "cyclical disease," that it pursues a definite course; that we cannot arrest its progress, and that our efforts should be directed to sustaining the patient during its continuance, whilst endeavoring to combat such symptoms as might, if unrestrained, precipitate a fatal issue.

The former object includes the comfort we may be able to afford, by mitigating certain sources of irritation, such as cough, restlessness, and pain. While doing this, we should not be overshadowed by the name of the disease that confronts us, nor be particularly influenced by remedies vaunted as specifics, which would only disappoint us and probably jeopardize

the safety of our patients. Massive doses of such powerful drugs as antimony and digitalis, should be sedulously avoided, and the treatment should be in a great measure expectant, not forgetting the *vis insita naturæ*, nor that "the curative efforts of the organism are ever manifest and all important."—(Germain Sée).

An experienced, careful nurse should be immediately procured, vigilant, sympathetic, and kind, to minister to the every desire of the prostrate sufferer, who should be placed upon a comfortable bed, in a quiet, darkened chamber, well ventilated and kept at a temperature of about 62° F.

If the tongue is coated, indicating a sabrural stomach, and the bowels constipated, as is likely to be the case, it might be well to commence with a mild purgative of calomel or blue mass. The "stitch in the side" will demand hot poultices frequently repeated, and if unusually severe and intractable, a small blister should be applied over the seat of the pain, and covered by the poultices until vesication of the cuticle ensues. In the early stage of uncomplicated cases, before exudation, after a motion of the bowels, I am in the habit of prescribing, and I think with benefit, minute doses of morphine and tartarized antimony, $\frac{1}{16}$ of a grain each dissolved in water, to be taken every hour or two when awake, as long as not contraindicated. This solution has appeared to do good, by relieving pain, allaying the irritating cough, and quieting restlessness, thus facilitating recovery; or if the tongue remain furred, opium and calomel, $\frac{1}{4}$ of a grain of the former, and $\frac{1}{2}$ of a grain of the latter, in the form of pill, can be substituted, and after a day or two, quinine in 1-grain doses repeated every two hours, may be combined with either the one or the other. The strength of the patient must be supported by nutritive alimentation, and should it become decidedly diminished—as indicated by the pulse—brandy, either alone or with milk, in the form of milk punch, and the sesquicarbonate of ammonia, in requisite doses, may be given alternately, at intervals of two hours, until the heart responds to their action, and the temporary adynamia is relieved.

This plan, judiciously regulated, is entirely innocuous, and, in my opinion, promotes those conditions most favorable to a speedy and fortunate termination of the illness, which usually occurs in about a fortnight.

When, however, in pneumonia, severe and dangerous complications arise, all our resources may prove unavailing. Such cases generally succumb, and if they recover it is doubtless due rather to individual tenacity to life than to any mode of treatment that might have been resorted to to cure. They get well in spite of our remedies.

It was in such grave conditions that formerly, when the pulmonary lesion was held to be a primary affection, and the cause of the subjective pyretic phenomena, those heroic measures, now happily obsolete, were invoked; but careful statistics have proved the fallacy of their adoption, and more mature experience has consigned them to merited oblivion.

One of the most dangerous complications developed during the course of this pyrexia is a tendency to failure of the cardiac forces, which has been attributed to the continuous and excessively high bodily temperature, so conspicuous throughout its entire duration, inducing, according to modern authors, paralysis from fatty degeneration of the muscular fibers of the heart. This exigency urgently demands prompt antipyretic measures, and they should be resorted to early in the attack, as prophylactic against

the threatened change ; cold, in some form, applied to the surface of the body, being considered, at the present time, the plan best adapted to the attainment of this end, certain drugs known to possess the power of reducing the animal caloric being administered subcutaneously, as adjuvants. Quinine is the only one that merits reference here, and to secure this effect an enormous quantity is recommended, as high as 70 grains at one time, once in forty-eight hours, having been prescribed ; this is unquestionably a dangerous amount, smaller, but still large, doses being generally given, a proportionately long interval elapsing between them.

"The danger in croupous pneumonia threatens principally from the heart. Death results from insufficiency of the heart."

"It must never be forgotten that the most dangerous enemy to the heart is the high temperature, and that it may be quickly and safely lowered by bathing."

—(Juergensen.)

The distinguished investigator quoted above relies also on other modes of treatment to reduce a hyperthermic temperature, such as cold affusions, wet sheets, also quinine in toxic doses ; and, if they prove inefficient, he resorts to the cold bath, in the tub, the manner of administering which he describes minutely, and advises it repeated, *pro re nata*, until decided results are obtained ; but he does not ignore stimulants. He says : "It is possible, by the proper and bold use of stimulants, to maintain life in pneumonia for at least three or four days after the heart has shown indications of exhaustion, and very often for even a longer period."

Niemeyer, having observed favorable results from the action of compresses wrung out of cold water, applied to the chest, "the affected side in particular," repeated at intervals of five minutes, strongly advocates their trial, and, although he never has succeeded in aborting a pneumonia by this means, he has materially curtailed its progress, and thus hastened convalescence. This eminent professor, under certain circumstances, also advises blood-letting. "When pneumonia has attacked vigorous, hitherto healthy subjects, and is of recent occurrence, the temperature being higher than 105° F., and the frequency of the pulse rating at more than one hundred and twenty beats a minute, free venesection will reduce the temperature and lessen the frequency of the pulse."

Doubtless this result could be obtained by the means employed, but what conservative physician would resort to it, for this purpose alone, in private practice ? Louis, who first proved by statistics that venesection in pneumonia increased the ratio of mortality, affirms : "You cannot regulate these inflammations by bleeding," and now it is only resorted to when special indications arise, when the symptoms become aggravated and the natural progress of the disease is arrested by adverse phenomena which threaten life. It is in these contingencies where the prompt use of the lancet may become imperative during the continuance of pneumonia, not so much inflammatory, *per se*, as the result of inflammation. I allude to passive and active oedema of the lungs supervening during the course of acute pneumonia, where the extreme dyspnoea threatens suffocation, and cyanosis tells us that asphyxia impends. At such a crisis bleeding should be resorted to until relief is obtained, without unnecessary delay, and repeated as the lesser of two evils, should the nature of the case demand it.

If we confine our attention now to acute lobar or croupous pneumonia, or that form of pneumonia which is accompanied by fever and usually runs a pretty definite course, the question of its etiology obtrudes itself. Is this form of pneumonia always due

fold morbid phenomena of pneumonia, so familiar to the practical physician, and which he is so competent to recognize and treat, but, in conclusion, I may be permitted a brief recapitulation, repeating that it has a definite course to run, each case its own, and that neither bleeding, blistering, purging, nor any other active measures, will change or shorten its duration ; therefore, it becomes our duty to try to safely guide our patient through it, relieving as best we may his more distressing symptoms, keeping him comfortable, protected from harmful agencies, nourishing him, soothing him, cheering him, and above all encouraging that hope, which Bouchardat, the learned Professor of Hygiene of the Faculty of Paris, tacitly admits, is more potent to cure than all medication : *L'homme même le plus éclairé, quand il est malade, aime les remèdes ; en les prescrivant sagement, on donne l'espérance, qui est un bon auxiliaire pour arrivée à la guérison.*

CLINICAL REMARKS ON PNEUMONIA AND ITS VARIETIES, ESPECIALLY FROM THE THERAPEUTIC STAND-POINT.

By FRANK WOODBURY, A.M., M.D.,

Professor of Clinical Medicine in the Medico-Chirurgical College; Fellow of the College of Physicians of Philadelphia, etc.

PROPERLY speaking, pneumonia is a comprehensive term which includes a group of inflammatory pulmonary affections, differing materially and essentially from each other in their etiology, clinical history and therapeutics. This group is easily divided into two classes, whose chief distinguishing mark is in their duration ; they are therefore for convenience styled *acute* and *chronic* in common parlance. Leaving the chronic forms out of consideration, at present, we distinguish several varieties of acute pneumonias. Every first-course medical student knows of the existence of lobular as well as lobar pneumonia, or the catarrhal and the croupous form, and is prepared to point out their points of difference in morbid anatomy, symptoms and treatment. But we also have pulmonary inflammation occurring as a frequent complication of other maladies. Thus acute pneumonia may attend meningitis ; it may follow injuries to the chest or contusions of the body, or more frequently appear as the result of exposure to cold and dampness ; it may occur in the course of erysipelas, typhoid fever, measles, small-pox, diphtheria and other acute infections, or as a result of an inoculation with syphilitic poison. Under these circumstances, it is necessary to use some qualifying adjective in connection with the term pneumonia, in order to obtain a definite idea of the special form of pulmonary disease which it is proposed to take up for consideration. Pneumonia, therefore, is a term which, strictly speaking, does not correspond with any individual disease, but is generic and requires a specific title in addition. It is true that acute croupous inflammation of the lungs, or lung-fever, is usually, and in familiar language, called pneumonia, but for scientific discussion this is not sufficiently definite. Precision in therapeutics is not attainable unless there is equal accuracy in diagnosis and uniformity in the application of clinical terms to pathological conditions.

If we confine our attention now to acute lobar or croupous pneumonia, or that form of pneumonia which is accompanied by fever and usually runs a pretty definite course, the question of its etiology obtrudes itself. Is this form of pneumonia always due

to the presence of a "single, peculiar and specific morbid material," or in other words, a pneumococcus, or similar micro-organism of necessarily almost universal distribution? There are circumstances which make such a hypothesis highly plausible, and it may apply to the majority of cases, and yet there are exceptions which serve to prove that this hypothesis is not always infallible. For instance, it has been claimed that the so-called *sthenic* form is caused by the micrococcus Pasteuri (Sternberg) or Fraenkel's coccus, while the *asthenic* is usually produced by the pneumococcus of Friedländer. A form of acute lobar pneumonia has been described by Pignatari, occurring in marshy districts, and evidently caused by malarial germs, since it is curable only by quinine. Prudden and Northrop, by the intra-tracheal injections of pure cultures of the streptococcus in rabbits, have succeeded in producing acute pneumonia with great uniformity of results, thus proving that the pneumonia occurring in children suffering with diphtheritic angina, is really an inspiration-pneumonia. Mosler reports cases of an infectious form of pneumonia, in which he detected a species of bacterium clearly belonging to the group of bacteria of rabbit septicæmia, fowl-cholera and allied diseases. In the pneumonia of influenza both the so-called pneumococcus and the micrococcus Pasteuri have been recognized.

While it is true that cases of acute lobar pneumonia may unquestionably be due to different forms of micro-organism, yet, in point of fact, the great majority of cases of acute lobar or croupous pneumonia occurring in private practice resemble each other so closely as to form a special type, and may very readily own a common cause. It is the opinion of many competent observers that, in the present light of bacteriological investigation, this cause is, with great probability, the micro-organism termed the pneumococcus of Friedländer, but the knowledge of the existence of other forms should put the diagnostician upon his guard.

This brief discussion of the etiological status of pneumonia is necessary before considering the question of treatment, not because bactericidal therapeutics have been proven to be the most successful, or successful at all, but for the simple reason that it is necessary to agree as to the identity of a disease before its treatment can be clearly and systematically indicated. It may not be amiss just here to remind the medical mathematician of the fallacy underlying the numerical method of estimating the results of treatment, owing to the very obvious fact that patients vary in vital resistance, and that some will necessarily perish, even under the best therapeutic methods, and others will survive the worst treatment, having tenacity of life sufficient to enable them to recover, both from the disease and the treatment.

With regard to treatment, it is evident that it is the patient in disease which is the object of our solicitude, and not the disease in the patient. Hence, there should be no routine treatment. Rest in the recumbent posture, in a well-ventilated, rather cool room, diet restricted to toast-water and thin broths, principally farinaceous, during the period of access, and more nitrogenized after the decline of the fever, with the care of a judicious, well-trained nurse, is, if not the principal part of, at least the most important adjunct to, the treatment. If there is much fever, potassium nitrate (in doses of from 3 to 5 grains every two hours) will reduce the force and frequency of the

pulse, and act upon the skin. In cases that will bear it, the addition of gr. 1-40 of tartar emetic to each dose, will render the former remedy more efficient. If the cough is troublesome, and there is great restlessness, chloral hydrate and potassium bromide may be given in syrup of lactucarium, in preference to an opiate. If there is decided congestion, with profuse bloody expectoration, thorough cupping of the chest will be serviceable, and if there is much pain in a plethoric patient, some of the caps may be cut. Bleeding by venesection should be done early, if at all, and where the patient is suffering with engorgement of the pulmonary circulation, with distended right heart. Where a considerable portion of the lung is shut off by the congestion, and the lips and finger-nails are bluish, and the patient is dyspneic, the necessity for venesection seems imperative as a temporary expedient to save life, but not for its effect upon the course of the disease. As shown by J. Hughes Bennett, as a routine measure, venesection in pneumonia does more harm than good; but in exceptional cases it is resorted to on mechanical grounds to relieve blood-pressure, and reduce the volume of the circulating fluid. Quinine is useful at the time of exudation to limit the excursion of the white blood-cells, while in the malarial form it is essential to success, and during convalescence cinchona is very helpful. Digitalis regulates the heart's action, and is a conserver of energy in this respect, thus sustaining the heart during the critical period, and tiding the patient over the danger until the period of decline or crisis occurs. It also exerts a diuretic action, thus aiding in keeping the blood in good condition. Ammonia, especially in the form of the aromatic spirits (in drachm doses every four hours), is a valuable cardiac stimulant, and is believed to exert some favorable action upon the blood, so as to reduce the fibrinous deposit, and to favor its absorption. Carbonate of ammonia does not answer so well in adults, although in children, it is certainly very beneficial. It can be administered in equal parts of liquor ammonii acetatis and tolu syrup.

With regard to alcoholic stimulants it may be said that in a great many cases they are entirely unnecessary, and in others they may be restricted to some light wine during convalescence. In a few others the administration of alcohol is necessary in order to keep up the patient's habits of life, but care should be taken not to go beyond the bare necessities of the case, since alcohol is a poison to the respiratory centers. In exceptional cases champagne may be required for irritable stomach, or milk-punch for weakness of the circulation, especially in elderly persons, and the amount to be given will depend upon actual experiment. Hot jacket poultices, renewed every four or six hours, favor diaphoresis, relieve pain, and allay restlessness. Turpentine stapes at the beginning are certainly valuable as counter-irritants; they may be followed by a liberal application of sweet oil to the chest, which is then covered with carded wool, coming over the shoulders and kept in place with a roller bandage. This may be changed once a day, when the patient may be sponged with luke-warm water from head to feet.

At the very outset of the attack an emetic of ipecacuanha will have a very salutary effect, and will reduced the tendency to pulmonary congestion. This may be followed by saline cathartics, especially sulphate of magnesia, so as to produce free purgation. If the patient be treated according to the outline indicated, aiming to moderate the intensity of the symptoms rather than to shorten the disease, and keeping

him quiet and comfortable, the best results will undoubtedly be obtained.

Aconite and veratrum viride are not essential to the treatment, and if used at all, should be very guardedly used on account of their depressing action upon the heart, which, with its own nutrition impaired by the fever process, is laboring to accomplish more work than is required of it in health. In children, however, a few drops of tincture of aconite root in a tumblerful of water, of which a teaspoonful is administered every quarter of an hour, will produce very decided effects upon the circulation and respiration, quieting the cough, favoring perspiration and permitting the child to fall asleep. Blisters are now obsolete in acute pneumonia, but it cannot be denied that their effects have often been most prompt and satisfactory in apparently desperate cases. In threatened collapse, the centesimal solution of nitro-glycerine, in drop doses every quarter or half an hour, is an admirable diffusible stimulant, and has saved lives. It was first used by Dr. Andrew H. Smith, of New York, in the treatment of pneumonia, who reports excellent results from its use.

The question whether or not pneumonia can be aborted by treatment is still unsettled. If as Juergensen claims it is not an inflammation, but a specific fever having its lesion in the lung, just as typhoid fever has its characteristic lesions in the intestines, we should not expect that any remedy would infallibly and materially shorten the duration of the disease. There is no form of treatment that can be depended upon to abort pneumonia. And yet I have seen some very promising cases of what appeared to be croupous pneumonia which never got beyond the stage of congestion, just as I have also seen a few cases of well-marked enteric fever which entered into convalescence in the second week of the disease (the brief abdominal typhus of the German school).

Pneumonia affords an excellent field for the exercise of discriminating powers, good judgment, and therapeutic skill. In the words of the venerable S. D. Gross, my old teacher and dear friend, whom I shall always recall with affection and regret, I may most appropriately close these desultory remarks upon a fruitful theme: "To treat all patients similarly or on one uniform plan would be contrary alike to the dictates of common sense, the requirements of science, and the experience of the profession."

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TREATMENT OF PNEUMONIA.

By WILLIAM F. WAUGH, M.D.

In this paper the treatment of lobar or croupous pneumonia, acute pneumonic fever, will be considered, the catarrhal and chronic forms of pneumonic inflammation not being included. The subject is apparently a simple one; yet, judging from the diversity of the views expressed in the medical periodicals, there is far from being a uniformity of belief. Indeed, in no other serious affection can there be found such a variance of opinion, not only as to the choice of remedies, but as to the fundamental principles upon which the use of remedies is based. The reason of this is to be found in an exaggerated idea as to the rôle of drugs in modifying the course of the disease.

Dr. E. F. Wells read a paper before the Chicago Medical Society, in December last, in which he considers the prognosis of pneumonia.

He says: "The death-rate of pneumonic fever varies, according to the statements of authors, from *nil* to 100 per cent. I have collected and tabulated

the statistics of 223,730 cases of this disease, of which number 40,276 perished from the direct effects of the malady—a rate of 18.1 per cent. These cases have been drawn from every available source, from all parts of the world, and have been subjected to every imaginable mode of treatment. Numerous schools of medical philosophy, and eras of fashion in therapeutics, have also passed through the various stages of their existence during the period of time covered by this inquiry. Notwithstanding this, it will be noticed that the death rate of all the larger collections of cases—with few exceptions—is nearly the same, although they were probably subjected to widely different, possibly diametrically opposite, methods of therapeutics. From this we may infer that treatment alone has exercised but little influence over the natural course of the malady, and that the results of this analysis fairly represent its normal fatality. In addition, we have an indirect mortality of about 1.3 per cent. from cases followed by dependent chronic ailments, which, added to that from the disease *per se*, raises the true mortality rate to about 19.4 per cent."

Little benefit is to be expected from a comparison of results as published. Some observers include the "necessarily fatal" cases, such as those depending upon cancer; terminal pneumonias of diabetes, nephritis and tuberculosis; and, also, such complicated cases as typhoid fever with pneumonia. These should be omitted, in estimating the relative values of different methods of treatment; as a series containing a large proportion of such cases could not justly be compared with another series that contained none. The same holds true of cases occurring in connection with delirium tremens; the catarrhal pneumonias of infancy, those occurring in connection with measles and croup, and the dangerous form which occurs in the aged. There is the more reason for separating these groups from the uncomplicated lobar pneumonia of adults, in that the treatment that proves successful in the latter is not necessarily, or even suppositiously, suited to these special classes.

Limiting ourselves to this class of uncomplicated cases, it must be said that the tendency to death is remarkably small for so serious a disease. This is shown by the good results following the most diametrically opposite methods of treatment. The value of tartar emetic is insisted upon by Rousseau, most emphatically, and yet he is said (I quote from Wells) "never to have lost a genuine case in a child." On the other hand, Juergensen stands out prominently as the advocate of the supporting treatment, and his death-rate in uncomplicated cases was almost *nil*. In Dr. Levick's letter he shows how extreme is the solicitude with which he seeks to protect the heart from any possibility of failure, yet in the quotation from the *Proceedings of the Allegheny County Medical Society*, it will be seen that there was a unanimous expression in favor of veratrum, aconite and salicylate of soda.

The only way to reconcile such oppositions is by admitting that the tendency is to recovery in nearly every case of simple uncomplicated pneumonia, and that this tendency is so strong that scarcely any form of mismanagement can overcome it. For if the treatment by raw beef, red wine, quinine and cold baths be right, and Juergensen's statistics show it to have been remarkably successful, how can the treatment by veratrum, antimony and venesection be anything but wrong?

The truth is that neither is the heart so likely to fail as the ultra stimulationist asserts, nor is this organ to be harnessed in and curbed like a runaway horse,

as the advocates of sedatives appear to think. But if the results be equally good, the quicker relief obtained by the judicious use of sedatives counts in their favor. The observations of our fathers showed that great relief followed the venesection universally practised at the beginning of the treatment, and if the statistics show, as Wells claims, that the mortality is no less now than it was in those days, the practice could not have had the ulterior bad effects its opponents alleged. The truth is, we have dropped an efficient means of palliation without any corresponding advantage.

But we have not lost our patients in the appalling manner the old bleeders predicted. They thought their venesections were absolutely necessary to stay the progress of the disease and to save life; but we now see that this could not have been the case. The truth is that in pneumonia nothing can replace the close attention of the physician. He must be prepared to employ sedatives or cardiac tonics, according to the exigencies of the case; he must be quick to turn from one to the other; to stop his veratrum at the first indication of failing heart, and be ready to bleed if threatening "collateral fluxion" demands it.

If hot poultices are sufficient to relieve the oppressive symptoms in the first stage he may be content to let the patient alone, simply regulating the hygiene of the sick room. And how much this covers in the hands of an experienced physician. The care necessary to keep the temperature even by night and by day, and yet to insure free ventilation, and keep the air charged with moisture; the changing of poultices, and of clothing when wet with perspiration, and the avoidance of cold; the use of food, nourishing yet not stimulating, and the relief of thirst, without overcharging the circulation with fluids are some of the problems that confront us. These are not easily solved with the assistance of trained nurses in hospitals; in private practice among the poor, the difficulties to be met are great.

The use of soups is to be condemned. Niemeyer showed clearly that venesection relieved the oppression due to collateral fluxion, simply by reducing the volume of the blood. The abstraction of the nutritive elements of the blood is to be deplored; it is an unavoidable evil, and one so great that in every case the question is to be decided, whether the gain of comfort and the avoidance of oedema of the lung is worth the price paid for it in blood that is all the more valuable under the circumstances. For when a large proportion of the fibrin has been withdrawn from circulation, and the heart has been called upon to do extra work, the nutrition of this organ suffers from the poor quality of the blood furnished for its support.

But the good effects of the bleeding may be lost by the carelessness of the nurse, who allows the thirsty patient to replace the bulk of the blood removed by innutritious water. Here we have the loss without the gain. On the other hand, we may obtain the benefit without the loss, by withholding fluids until the emunctories have thrown off the excess of water. For this reason, instead of soups, the patient should be put upon a dry diet; whose effect in reducing the volume of blood is so great that Da Costa speaks of aborting a pleurisy by it. Thirst is to be controlled by acid solutions in teaspoonful doses, little pellets of ice, teaspoonfuls of hot water, bits of orange peel held in the mouth, and such expedients. The concentrated pre-digested foods are the best forms of aliment in all cases where a maximum of digestibility and nutritive strength, with a minimum of bulk, are indicated.

With the hygienic conditions properly regulated, and the use of hot flaxseed jackets enveloping the chest, it is only exceptionally any sedative is required. If it be, preference is to be given to the chemical antipyretics rather than to the nauseant emeto-cathartics, like veratrum and antimony. Antipyrine, acetanilide or phenacetine, in doses commensurate with the fever and the oppression, are the best remedies. They are safe in the hands of any physician competent to treat a case of pneumonia. The addition of cocaine, in doses of $\frac{1}{8}$ to $\frac{1}{6}$ grain, does not detract from the antipyretic action, but serves to tranquillize the nervous system, relieve delirium, and in some measure to sustain the heart, without hardening the pulse. The addition of quinine to this prescription is questionable. In small doses this drug has no appreciable effect on the temperature, but acts as a heart tonic. It hardens the pulse, however, and increases the tendency to delirium; while it sometimes proves irritant to the stomach or bowels, an occurrence to be dreaded in pneumonia. In malarial districts it is natural that this drug should acquire a reputation in pneumonia that could not be sustained elsewhere. Except when there is a special indication for its use, quinine does not lessen the tendency to death in pneumonia. This does not apply to the catarrhal pneumonia of infants, where large doses of quinine (5 grains by suppository, every eight hours) constitute the most effective means at our disposal for cutting short the attack and bringing on speedy resolution.

If the cough be troublesome, in spite of the measures above described, small doses of Dover's powder or codeine will give relief. But the cough rarely demands special treatment, if the poulticing be well done, and the air charged with moisture.

It has been asserted that if the stomach and bowels are disturbed, the irritation quickly disappears under the use of the sulpho-carbolate of zinc, in solution or powder, 2 grains every two to four hours.

In the pneumonia of the aged the mortality is, and will be, much greater. The subjective symptoms are less marked, the fever latent, and the disease is unnoticed or underrated until well advanced; the patient meanwhile keeping on his feet, to the great detriment of a heart already subject to senile changes. The indication for support of the heart is more imperative here; and the need of sedatives is less, as the symptoms for which they are required are absent. If we once rid ourselves of the notion that bleeding, veratrum, *et id omne genus*, have no direct influence in checking the spread of pneumonia through the lungs, we simplify the question greatly. Hot poultices with mustard, or painting the chest with iodine, are useful. Phenacetine is the only antipyretic to be used; and that only in moderate doses, when the temperature rises above 102° F. The heart must be carefully watched, and quinine, strychnine or sparteine given when required. The physician must not let his patient go without a visit for more than three or four hours, until the crisis is safely passed. Careful nutrition is more than ever requisite; and care taken that the gravity of the case is not overlooked; frequent physical examinations being necessary. Nor should the symptoms be masked by the use of opiates or alcohol. The former are contra indicated. Of the latter as little should be given as the previous habits of the patient will permit. In pneumonias of all classes this should be the rule as to the use of alcohol. If the patient be in the habit of using alcohol when well, it is unsafe to stop it when he has pneumonia; as the stoppage will cause a relaxation of the heart that has its dangers. This does not refer to

the use of stimulants in threatened collapse, where alcohol is peremptorily required; but to its systematic use throughout the course of the pneumonia.

As the sensitiveness of the bronchial mucosa in the aged is weak, the occurrence of coarse râles calls for the use of stimulants, senega, serpentaria, ammonia and sanguinaria, of which the last is the best. Five drops of the tincture may be given, with some ethereal stimulant, quebracho and coca, every two hours. This combination is of considerable value.

Above all else, in the treatment of pneumonia of the aged, from first to last it is imperatively necessary to keep them in the recumbent posture. Dr. Levick must have had these cases in his mind when he wrote his letter (*vide page*). The best way to treat heart failure is to avoid the causes that produce it. Many of the "unexpected deaths" of aged pneumonics are due to the neglect of this precaution.

The treatment of drunkard's pneumonia is the most difficult of all, as the prognosis is the worst. Wells, in the pamphlet already quoted, says: "Huss lost 20 per cent., and Fismer 50 per cent. of the alcoholic cases; and Greene estimates the death rate of such at from 25 to 50 per cent. I am inclined to think that, in confirmed drunkards, it exceeds even these figures.

"The victim of chronic alcoholism is in such a state of physical and mental weakness as to be illly able to withstand the onslaught of any disease, and especially one of the gravity of pneumonic fever. He is usually a man having the appearance of robust health, but a careful scrutiny will reveal this to be a delusion and a snare. His bloated and rubicund visage, his ponderous abdomen and his full but soft fleshy parts, are no more the indication of strength and vigor than is the padding of a Punch and Judy character. His digestive apparatus is in a state of chronic irritation, and it has for so long a time been accustomed to excessive stimulation that it no longer responds to ordinary irritation, and in the case of disease refuses longer to receive food or even the fiery draughts which have been the patient's ruin. The nervous system also weakens remarkably.

"When pneumonic fever attacks such a person it is prone to pursue a latent and insidious course. The initial chill is either absent or but slightly marked. The patient has for several days, lost his appetite and cannot retain upon his stomach his accustomed ration of alcoholic liquors. He is nervous by day and restless by night. He feels tired and languid, and no longer seeks his companions at his accustomed haunts, but prefers to remain at home, and yet is afraid to be alone. With the access of the disease he is at once and completely prostrated. He may have a cough, with expectoration and some uneasiness referable to the chest. The cough, if present, often escapes notice from the fact that these old topers have an habitual cough and hawking. If the lungs be now examined, the ordinary physical signs of pneumonia inflammation will be found. Delirium tremens is of very frequent occurrence, and the patient, obtaining no sleep, together with the constant action, absence of nutrition and the ravages of the disease, soon falls into a state of profound depression and usually dies."

The treatment applicable to the pneumonia of the aged may be used for the alcoholic. To this is to be added the regimen suited to delirium tremens. The patient is to be watched constantly by competent nurses. He is to be fed sedulously. He must be kept as quiet as possible; the means varying with the case. Very rarely, in young subjects, nothing

but tartar emetic will subdue the violence of the delirium. Generally, capsicum and coca will have the same good effect they manifest in delirium tremens. Strychnine is often required in doses much larger than are ordinarily given; if the withdrawal of stimulants is followed by symptoms of approaching collapse. The cold bath, if employed at all, should be used with caution. In this class of cases, the method of Juergenssen did not prove very successful. If the physician be required to visit the aged pneumonic every four hours, he should literally take up his residence with the alcoholic pneumonic. Nobody but the physician can control him, enforce the required recumbency, compel him to take his food, and meet the incessant demands of this most troublesome patient, and the sudden changes in his condition. The exigencies that require such powerful remedies as antimony, require also the judgment of the physician to make a change in the treatment the instant it is required. When such conditions can be secured, the death-rate will not be much higher than in simple pneumonia.

THOUGHTS ON PNEUMONITIS (PNEUMONIA).

By E. CHENERY, M.D.,
BOSTON.

THREE lies mapped out before me an experience of forty years in the treatment of pneumonitis in common with other diseases as a general practitioner.

The disease is not one, nor is its treatment one, in the sense of a routine, and what is more, no really skilful physician can delegate his genius to another, nor tell or write very accurately what he would do for a case till that case presents itself to him in its totality. Strong and successful physicians are supremely so only in their own contact with cases.

Pneumonitis easily divides itself into two forms, which are widely distinct in cause and character—lobular and lobar.

Lobular pneumonitis is always preceded and accompanied by bronchitis. Hence it is a complex or compound disease, the bronchitis being an important, and often the most important, element of it. The very young and the aged in whom bronchitis is frequent and has an unusual tendency to spread, and so invade the smaller tubes and their terminal cells, are the most liable to it, and it is pre-eminently that form of the disease so often attendant on whooping-cough and measles, the important part of which is this bronchitis. Being thus a compound disease, bilateral, diffused in minute points, and producing death at widely different times and manner, as compared with the other form, it need not be further considered here.

Lobar pneumonitis—I never use the term croupous, as it misleads—is wholly a different disease from the former, though it may be attended by either or both bronchitis and pleuritis. It is not dependent on either of them, and may be independent of both. It is confined to neither sex nor age. It is mostly unilateral, affecting one or all the lobes of that side and sometimes it involves the other side, producing double pneumonitis. Its danger chiefly depends on two circumstances—the extent of the invasion and the reserved respiratory capacity of the person affected; the latter is the most important. Hence it rarely kills young people, while the aged, and particularly women, readily succumb to it—the aged from the fixed and inelastic character of their thorax, and the women from the fixed contracted area of their chests.

from the habit of dress, thus it is twice as fatal in women in middle life as it is in men of the same age, nature avenging itself in this way for its insults.

This mapping out of the cases shows that a very large part of them are destined to get well no matter what we do, while many are doomed to die, do what we may. Between these extremes there is a great number whose life depends on the management by the skilful physician; and I take it that it is to this class especially that our attention is directed, that by comparing ideas our skill in their successful management may be brightened.

What, therefore, is to be done in the cases where the treatment is the important thing?

If we are lucky enough to see the case after the nervous disturbance, while the congestion is going on and before the blood stasis or hepatization is established, two indications meet us—to check and decrease as far as possible the fullness of the blood-vessels, and to lessen the pumping power of the heart, the treatment centering in its effects upon the circulation. For the first, hydragogue catharsis, especially full doses of the quick acting salines, and by diaphoretics; the object being to diminish the amount of fluid which must be circulated. This is further supported by the lowest possible amount of food and drink for the time. Here pilocarpine has physiological fitness as probably the very best diaphoretic. Other non-stimulating diaphoretics have their place here, aided by warm fomentations and chest-packing to protect the surface and keep the pores open. Dover's powder in full doses is also a powerful diaphoretic, beside relieving the cough when it exists and the pain which occurs in 85 per cent. of the cases, and relieving nervousness and restlessness. Both Dover's powder and aconite favor diaphoresis and at the same time diminish force of the heart in pushing the blood into the diseased part. Right here, I think, is our best chance with soda salicylate. Some years ago, before I knew that it was being used for this disease, I had a feeble man about fifty-five years old, who presented all the typical signs of the congestion stage. Feeling that I must strike sharp and hard then, or I should most likely lose him, I prescribed the salicylate in $7\frac{1}{2}$ grain doses every hour for a few times, then every two hours. On visiting him next day, I was surprised to find the excessive sweating the medicine had produced. The bed was literally wet. But the pain, the fever, the dusky flushed face and the rapid breathing had all gone, and he was soon up. It was one of the most remarkable successes I have seen from medicine. I have used it at various other times with excellent results. Like the alkalies, this medicine serves to cut and liquefy the phlegm. Forty years ago I used the lancet in some of the worst cases in this stage, and sometimes with almost as marked success as in the case referred to by salicylate of soda.

But when the lung gets full so that air cannot enter the part and capillary stasis is produced, for the venous blood cannot pass through and out of the lung to the left heart except it be aerated, then there follows much greater distension of the right heart and the vessels leading to the obstructed lung. And also in proportion to the obstruction does the venous system become engorged, backing the blood upon the jugulars, the liver, and even the kidneys, so much so that at this time the kidneys are likely to pass albumen, casts and blood cells. The face swells, and the skin everywhere betrays the venous obstruction. However, in proportion to the extent of the hepatization does the blood fail to get through to the left heart

to be sent into the arteries, and instead of their being full and bounding the pulse is small and compressible. What now can be done? The philosophy of treatment in the bad cases at this time lies in relieving this venous engorgement, and diminishing the work of the rapidly exhausting right heart, or else heart failure will soon stare us in the face. We may seem to do something, and let the disease go on, and take our chances. Alcohol is out of the question to every really thinking doctor; for recent physiological experiments have demonstrated that the heart cannot carry through and deliver as much blood under the influence of alcohol as it can without the liquor.

The time for depressants is now past. I have a serious doubt about quinine. What shall be done? I let just such a man go on and die of heart failure, deferring to popular modern practice. I will not do it again if I can have my way. In my early practice I used to prick into such engorged sides and let out some of the venous fluid to the great relief of the heart and the respiration, and to the thankfulness of my patient. Like Dr. Alonzo Clark, "I have not yet lost faith in blood letting," and if there ever was anything truly philosophical it is the lancet treatment of these cases properly selected. I have probably bled a score of them; and had better success than I have of late years had. There was a time I expected to save nearly all my pneumonia cases. I have a sharp remembrance of a woman; blue, congested, and in great suffering from the pain in the right side and the oppressions to her respiration, and yet she was within four weeks of confinement. There was no measure which offered me hope but the lancet. This she got to a good degree with great relief. The next day she got on very well. But the day after the engorgement had got back, though not so bad, and she begged me to bleed her again, which I did. She went on to complete recovery, and in due time had a good confinement. While leeches and wet cups afford considerable relief I do not approve of them, for they both get arterial blood, while the lancet takes only the venous.

It is the indiscriminate use of the lancet that has brought it into disrepute, as it is the misapplication of medicine that has cursed it.

After this Malakoff is carried, there are no other special directions I need to urge.

THE TREATMENT OF PNEUMONIA.

By C. L. DODGE, M.D.,
KINGSTON, N. Y.

IN the treatment of pneumonia rarely do any two writers agree. We find men, even at the present day, who are willing and eager to defend the practice of venesection as the most rational and successful of all forms of treatment. On the other hand, men eminent in the profession tell us that very little medicine is needed in uncomplicated cases, and none should be given which is not clearly indicated.

A young practitioner with but one text book will be apt to follow the treatment there laid down, but if he be the possessor of several, he will rise from their perusal with no clearly defined ideas as to the proper course to pursue with his next case of pneumonia. This wide diversity of opinion in the treatment of so common and fatal a disease, is unfortunate and greatly to be deplored. It simply serves to prove that we have no specific treatment, and that pneumonia cannot be "cured" by medicine. The multi-

plicity of remedies for a given disease, is an infallible index to our want of success in its therapeutical management. Furthermore, a self limited disease with an intrinsic tendency to recovery in uncomplicated cases, affords most unfavorable opportunities for determining the actual value of any line of treatment. Hence the apparent success with every new remedy brought forward for this disease.

While the pathology of pneumonia has been studied with great care, yet post mortem results can never give all, or the true causes of death. The modern view that "heart failure" is the real cause of death, meaning by this the occurrence of pulmonary edema and congestion, with the formation of heart clots, has influenced markedly the therapeutics of pneumonia. But is not this position partly one-sided? Does it not lose sight of the other conditions present in this disease? Death is often due to heart failure in typhoid fever, but it is not owing to obstruction of the pulmonary circulation. The assumption that because in pneumonia there is obstruction of the pulmonary circulation, consequent on the consolidation of a portion of the lung, therefore a patient lives or dies according to the ability of the heart muscle to overcome this obstruction, in the same way that compensation is effected by an hypertrophied heart in aortic stenosis, has led many a practitioner into a quagmire.

We have in acute pneumonia more than a mere mechanical obstruction of the pulmonary circulation; we have several elements in addition to combat. First is shock, second is fever, third is the arterial tension of the system at large. Besides these, but of minor importance, are pain, cough, etc. No two cases of sporadic pneumonia can be treated exactly alike. In one case the fever predominates, in another the pain is most complained of, in a third it is dyspnoea, and in a fourth a weak heart is the chief source of anxiety. Treatment therefore must be adopted to each individual case. In no other disease is routine treatment so unsatisfactory. It is freely conceded that there is a large class of cases that will get well with any or with no treatment. In vigorous young adults few will die under homœopathy, hydropathy or simple nursing, but these are not the cases that trouble us as physicians. What is the best treatment for the bad cases? This depends altogether on the particular type. In the old-fashioned asthenic variety, as seen in the country and smaller towns, the best results are obtained from aconite and veratrum viride, with opium in the first stages; later, alcohol is indicated if the pulse is weak or the fever keeps up. In the beginning, right after the chill, there is nothing to be compared to opium in some form for the shock. A hypodermic of morphine is the best. The opium should be continued for three or four days. This treatment has everything in its favor, and no valid objection can be raised against it. For persistent high temperature that resists the action of aconite and veratrum, quinine in moderate doses combined with digitalis and one of the mineral acids is frequently successful. Alcohol is not incompatible with this prescription, and is usually indicated at the same time. Paregoric or small doses of Dover's powder will relieve the cough, and should not be withheld on theoretical grounds in the second stage. It adds greatly to the comfort, procures sleep and relieves pain. The cold bath and cold pack I never employ; in the young and robust they are not necessary; in the old and feeble they are dangerous, the shock causing depression from which they are unable to rally.

Society Notes.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPÆDIC SURGERY.

Stated Meeting, March 18, 1892.

HENRY LING TAYLOR, M.D., Chairman.

ASYMMETRY OF THE EXTREMITIES.

DR. L. W. HUBBARD presented two sisters exhibiting this condition. One child had one and a half inches shortening of the left lower extremity, and about two and a half inches shortening in the left upper extremity, which was about evenly divided between the arm, forearm and hand. There was also slight shortening of the left ramus of the jaw. Her younger sister also exhibited about the same amount of shortening of the left upper and lower extremities. The muscles were developed in both cases. Their parents were healthy Germans, and there was no history of a similar deformity in other members of the family. An attempt had been made to explain this asymmetry on the theory that there is an unequal development of the cerebrum on the two sides.

DR. A. B. JUDSON had seen a counterpart of these cases in a girl of eleven years, in whom the right ear and eye, as well as the right upper and lower limbs, were congenitally smaller than the left. He suggested wearing an ischiatic crutch on the larger side, and a high sole on the smaller side, during the periods of rapid growth. He thought that hip cases treated in this way owed the disparity in length of the limbs, which is found in the tibia, as well as in the femur, partly to the disease of one and the over-use of the other. Advantage should be taken of this fact in the treatment of these cases of congenital asymmetry.

DR. R. H. SAYRE said that many writers had denied that want of symmetry in the lower extremities is a cause of true lateral curvature, and that the occasional association of the two conditions is a mere coincidence. Personally, however, he believed that if the children just presented were allowed to go on to puberty without the employment of measures to equalize the limbs, they would certainly develop true lateral curvature. In one of the cases the lack of development did not seem to him to be entirely confined to one-half of the body, as the left side of the face appeared larger than the right, although the extremities were smaller on the left side than on the right. On this account, he did not think the theory that this asymmetry was due to unequal development of the two halves of the cerebrum could be correct.

He agreed with the previous speaker that much of the atrophy following hip disease was due to lack of use, and he therefore heartily endorsed his suggestions as to treatment.

DR. A. M. PHELPS said that his experience had led him to believe that the shortening of the limb in hip disease is never due to anything but bone destruction, and that the employment of the treatment suggested would effect no change in the length of the limbs, although it might increase their circumference.

DR. R. H. SAYRE said that after cases of club-foot have improved sufficiently to enable them to use their feet, it is noticed that there is not only an increase in the bulk of the feet, but also in the length of the bones. It had also been observed in colleges where careful records are kept of the physical condition of

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the students, that those who exercise regularly in the gymnasium not only have larger muscles, but are taller than those who do not avail themselves of this opportunity for physical training.

RESULTS IN CASES OF HIP DISEASE TREATED BY THE PORTABLE TRACTION SPLINT, WITHOUT COMPLETE IMMOBILIZATION, EXCEPT DURING THE INFLAMMATORY STAGE, WITH ILLUSTRATIVE CASES AND PHOTOGRAPHS OF CASES.

DR. LEWIS A. SAYRE read a paper with the above title. He held that absolute immobilization of the diseased joint during the entire period of treatment, as advocated by a number of writers in the past few years, was not always essential to complete recovery, and he presented detailed histories of seven cases in support of this view. The diagnosis in all these cases had been confirmed by other surgeons of recognized ability, who had seen them in consultation. Photographs of five of these patients were exhibited, which showed absolutely normal mobility of the joint, the photographs being taken with both legs straight, and the patient in the standing position, and also with the foot of the diseased side on top of a chair, and again with the patient sitting with the foot of the diseased side on the knee of the opposite side, and the knee of the diseased side dropped so as to make the leg parallel with the floor. One patient was present who could do all motions equally well with either hip, and another, who was shown as a good, but not as a perfect cure, who could put either foot on top of a chair in front of him, and who could cross his legs, but who was unable to put the foot on the diseased side in his lap, as could all the other patients whose histories were reported in full.

Dr. Sayre then gave the following statistics of 407 cases of morbus coxarius, which he had treated between the years 1859 and 1889, exclusive of exsections:

First stage	118
Second "	119
Third "	82
Not mentioned	88
 Total number of cases	407

RESULTS.

Cured, motion perfect	71
" " good	142
" " limited	83
" ankylosed	5
Unknown	78
Under treatment	14
Abandoned	3
Discharged	2
Died of exhaustion	2
" phthisis	1
" pneumonia	1
" tubercular meningitis	5
 Total deaths	9
 Total number of cases	407

Cases in which the author knew the result, and also the kind of splint worn between 1859 and 1889, excluding cases under treatment:

Cures with perfect motion:

Long splint	19 or 21.59 per cent.
Short "	54 or 28.12 "

Cures with good motion:

Long splint	34 or 38.63 "
Short "	86 or 44.79 "

Cures with limited motion:

Long splint	20 or 32.95 "
Short "	49 or 25.52 "

Cures with ankylosis:

Long splint	3 or 3.40 "
Short "	1 or 0.52 "

Deaths:

Long splint	3 or 1.56 "
Short "	2 or 1.04 "
Treated with long splint	88
" short "	192

Total..... 280

The plan of treatment pursued in these cases had been rest in bed, usually with a blister behind the trochanter when the case was seen in the early stages, combined with traction in the line of the deformity with such weight as gave the greatest relief, while the body and sound limb were secured to a long splint passing from the axilla to the foot. In certain cases lateral traction was also added. This was first used by Dr. Sayre in 1868. When the acuteness of the joint spasm had subsided, and the deformity had been overcome, the line of traction having been gradually changed until the limbs were parallel, the child was allowed to get up with the short splint and crutches in some cases, and in other cases, with the long splint, either with or without crutches, according to circumstances. The author did not enter into the details of application, as these had previously been fully described. Cases involving both joints had been treated in the wire cuirass, as far as possible, in order to allow of driving in the sun and air. The limbs were occasionally removed from the cuirass, one at a time, for the purpose of making slight motion of the joint, inside the degree of causing pain. Traction was considered as one of the requisites of treatment, as the author had seen cases go on to extensive suppuration with entire destruction of the acetabulum, from reflex pressure, in spite of constant fixation by plaster of Paris for two years without traction. He had also seen a case of ankylosis of all the joints of the trunk and lower extremities in a case that was kept constantly in a cuirass for nine months without motion. The ankylosis in this case was not accompanied by any fever or pain, so that the supposition that a rheumatic diathesis was responsible for this condition was untenable.

Cases of exsection had not been included in the table of statistics, as they had been published separately, and most of them had been in such advanced stages when first seen as to preclude the possibility of mechanical treatment.

DISCUSSION.

DR. JUDSON agreed with the writer of the paper that traction does not secure complete immobilization, but rather fixation, or a fractional and sufficient degree of immobilization. Fixation thus produced, relieves pain and hastens recovery, but does not prevent the correction of deformity, which is brought about conveniently and surely as soon as the patient, wearing the hip splint or the ischiatic crutch, is taught to observe habitually the natural rhythm of walking. Adduction and flexion are thus reduced because the limb reaches outward and downward in abduction, and extension in order to do its share of the work of progression which is thrown upon it by the footsteps are equalized. He had been pleased to find that not only is deformity reduced, but also the range of motion is increased in the joint when the limb is summoned in this way to do as far as it can its half of the work of locomotion.

DR. PHELPS said that while listening to the paper, he had been impressed with the striking difference

between the statistics presented by the author and those published a few years ago by Shaffer and Lovett, notwithstanding that all these gentlemen used the same plan of treatment. In 39 cases reported by the two last named gentlemen, 19 had ankylosis, and 7 were in a condition almost equivalent to ankylosis. The author of the paper which had just been presented, deserved to be congratulated on the large number of magnificent cures which he had obtained. The speaker admitted that he had become somewhat prejudiced against the long traction splint, partly as a result of experience, and partly because of the publication of the statistics which he had just quoted. Where ankylosis had occurred, he believed it was due to trauma which had been produced by allowing the patient to walk upon the apparatus, or on account of a joint in the splint which allowed free motion, or because traction had not been made in the axis of the neck. He considered that the introduction of the long traction splint marked a distinct advance in orthopaedic surgery, but he thought still further advance would follow attention to the points just mentioned, and it was on this account that he had adopted the plan of complete immobilization. The long traction splint was born of a fear of ankylosis, and a desire that the patient should have exercise, yet in his own experience, which embraced a large number of dispensary cases of the worst class, ankylosis had not occurred in a single one of the cases which he had treated during the past four years. The members would doubtless recall the cases which he had previously presented, which, although completely immobilized for periods of about one year, still had complete motion of the joint. He did not believe that fixation of a joint, either diseased or healthy, resulted in ankylosis. The fact that ankylosis was not a constant result of fixation proved this theory to be erroneous. The "ossified man" during the early stages of his disease, had been subjected to all sorts of manipulation, yet every joint became ankylosed. He believed the case of ankylosis reported in the paper was due to some affection of the nervous system, and was not the result of the immobilization. Ankylosis is determined by the character of the inflammation, its severity and duration, the parts involved, and the subsequent cicatricial contraction of the capsule of the joint, and he could not see how passive motion could prevent such destructive changes. The long traction splint, no matter how applied, will allow the foot to be elevated 35° by tilting of the band at the pelvis. He preferred this instrument, however, to the short traction splint. Although he had employed lateral traction at first without knowing that it had been used before, he had since found several references to it in literature, showing that it had been used many years ago by Busch.

While on the subject of the use of the long traction splint, he wished to call to mind the fact that cases of hip joint disease present great differences, and that some which run a favorable course are accompanied by much pain, while others which are associated with extensive destruction of bone, have very little pain. He hoped that every one using the long traction splint would have as fortunate an experience as had the author, but for the present he felt that he must continue to use his lateral traction splint.

DR. JOHN RIDLON said that in a paper which he had written a few years ago on the subject of fixation and traction, he stated that as he had never met with a patient who had worn the short splint he thought this splint could not be used much in this

vicinity. He wished to take this opportunity to say that since writing that paper he had seen three cases which had previously worn this splint. He had been especially interested in Dr. Sayre's statement that he had secured better results with this instrument than with the long traction splint. Some years ago, he had come to the conclusion that the long traction splint was positively harmful as a walking apparatus, as it seemed to increase the "pumping action" at the joint. That it should do so seemed reasonable, when one recalled the fact that with a traction of from five to ten pounds, and a splint weighing from six to eight pounds, the patient at each step stands upon the splint, lifting the well leg and relaxing all traction. The effect of this upon the joint can be easily imagined, when it is remembered that a child running about, takes two or three thousand steps an hour. That this splint does exert a harmful influence in this way seems to be still further confirmed by the better results which the author had obtained from the short traction splint. As many of the cases had been treated at different times by both the long and the short splints, it was difficult to say how much of the good result was to be attributed to the one or the other splint. It seemed to him that some cases of hip joint disease seemed to recover, no matter what the method of treatment adopted, or even when they were entirely untreated. We had not yet found out what was the essential vital principle in the treatment of each individual case. As an instance of this, he cited the case of a child whom he had treated most carefully for six years, and yet the result was not as good as in the case of a sister of this child who had gone through the entire period of hip disease without any surgical treatment. It was true that some of his cases which should be on crutches were walking around on the limb, because he was unable to control them, yet he was free to admit that it did not seem to have hurt them.

DR. HALSTEAD MYERS said that the majority of cases of tubercular osteitis of the hip have the primary local focus in the neck of the femur at the junction of the epiphysis and shaft. We can recognize this condition by appropriate tests, and, as at this stage there is no involvement of the cartilages of the joint, it is obviously unnecessary to immobilize the joint; yet it is *most important* that concussion and pressure should be taken from the inflamed and softened bone, and that there should be no possibility of the weight of the body being thrown on that limb. He believed that in a number of cases the disease never extends beyond this location, and is cured *in situ*. He had no pathological specimens to prove this point, nor has it been investigated as yet; he spoke from a clinical standpoint. In cases where there is erosion of the joint surfaces bearing against each other, he thought motion is injurious, as well as pressure, as is plainly indicated by the presence of reflex muscular spasm, which is a reliable guide. We always find reflex muscular spasm at the point where motion is injurious. On the other hand, immobilization of a disorganized joint *provided pressure is also relieved*, he had never seen to cause any permanent injury to the joint. To show the importance of the relief of pressure in this connection, he stated that in order to relieve pain he had had to apply traction to a case of hip disease which was wearing a Thomas splint, correctly shaped and applied. Recognizing the importance of this evidence he had made repeated careful observations, but always with the same result, that traction was in this case necessary for the relief of pain.

DR. H. W. BERG wished to protest against the feeling of nihilism which might be engendered by Dr. Ridlon's remarks. If we were able to make a purely pathological diagnosis instead of a generic one—"hip disease"—we might be able to point out in advance those cases which would do well and those which would do ill.

DR. W. R. TOWNSEND said that while not wishing to detract in the least from the credit due the author for securing such excellent results, he desired to point out the fact that one factor contributing to this end, was undoubtedly the very favorable surroundings of his patients. Again, the author could hardly have selected better cases had he desired to illustrate the traumatic origin of hip disease, and the fact of many of the cases reported having such an origin affords still another reason for the excellence of his results. Bone tuberculosis and an osteitis due to traumatism may give the same clinical symptoms, but they should give different ultimate results.

DR. JUDSON said that for a number of years he had kept a description of all the hip splints he had applied, and their weight had ranged from one and one-half pounds in the case of a child, to a little over five pounds for a large adult.

He thought that some of us were dissatisfied with the hip splint because we expect more than the nature of these cases allows. We cannot cut short hip disease as we can break up chills with quinine. We must put the part and the system in the most favorable position attainable, and then wait for the processes of natural repair. This is best done by making traction, so long as it is needed, and protecting the limb throughout the treatment from the traumatism of walking, while locomotion is freely practised. Traction and protection are the features of the American method, by which it is distinguished from the Liverpool method of portable leverage, and the London method of recumbent traction. The results obtained by Dr. Sayre are good, but not exceptional. They are within the reach of all who adhere to the plan of treatment which has been outlined.

DR. R. H. SAYRE said that the fact that one man regards a case as tubercular, and another as non-tubercular, did not change the character of the lesion, nor influence the progress of the disease.

Regarding the question of the occurrence of ankylosis, he said that he believed some cases would become ankylosed whether motion was allowed or entirely prevented, and as an illustration of this, he recalled a case of double hip-joint disease in which the disease on one side was very severe, and was accompanied by extensive suppuration, while on the other side it ran a much milder course. During the progress of the disease in the lapsed joint, she was kept in bed or in a wire cuirass, yet notwithstanding this treatment and the apparently mild course of the disease, absolute ankylosis was the result, while in the other joint, good motion was secured. Again, after the disease was apparently arrested in both joints, and both seemed to be equally stiff, passive motion gave a good joint on the side which had suppurred, but resulted in no benefit to the other side. He had seen a number of cases of disease of both hips and knees, in which the joints seemed to be perfectly fixed until passive motion was instituted. He did not approve of leaving these stiffened joints to be loosened up by the ordinary motions which the patient would make.

DR. PHELPS said he agreed with the other speakers as to the value of forcible breaking up of adhesions under ether, but he could not understand how motion

of a joint during inflammation could prevent ankylosis. As the inflammatory material which limits the motion during inflammation is absorbed, there will be an increased motion of the joint, and in his opinion, active motion on the part of the patient was better than passive motion. He had frequently produced by passive motion a return of the pain and stiffness in the joint.

DR. TOWNSEND could not see how any one could believe that an osteitis due to traumatism represented the same pathological process as one due to tuberculosis, although the clinical symptoms might be identical.

The Chairman said that while all must admit that the statistics presented in the paper are not only brilliant, but exceedingly valuable, in comparing them with the statistics of those who do not resort to excision of joints, allowance must be made for those joints which had gone on to excision. This would also affect the mortality. One point which was very strongly brought out in the paper was the positive, decided, and immediate relief of pain obtained in the majority of cases from traction properly applied. In hip-joint disease it is fair to infer, as is also evident from the results obtained, that if the pain is relieved the treatment is beneficial to the joint. He believed in immobilization in the acute stage, so far as it could be produced by traction; but he did not believe it was necessary to go up to the axilla and immobilize the spinal column. Sometimes traction must be supplemented by recumbency, and sometimes by the use of crutches; these were all the necessary elements for the proper management of those cases which can be successfully treated by mechanical means. His own experience had led him to think that by far the most efficient method of applying traction was by means of the long traction splint.

DR. SAVRE, in closing the discussion, said that the statistics presented were only those which had been fully completed, and they represented forty years of work. He thought Dr. Phelps had misunderstood him about the question of motion at the joint. He had always advocated, repeatedly and persistently, rest of an inflamed joint; but he permitted such motion as the patient would himself make. He did not consider that any motion which would not cause pain was injurious. He applied sufficient traction to prevent pressure on the joint, and it was all important that this traction should be made in the proper direction. He did not approve of an unyielding strap which, in the splint used by Dr. Taylor and Dr. Shaffer, is attached to the pelvic band and the shaft of the splint: in his opinion, it should be made of elastic webbing.

As regards the etiology of his cases, he did not pretend to say whether or not the processes were tubercular or non-tubercular. At the time he began his investigations, everything was called "scrofula," and medical men believed that tubercle was always found in the lungs before it was deposited in other parts of the body. Having learned from autopsies on some cases of hip joint disease that there were no tubercles in the lungs, he began to doubt the tubercular nature of this disease, and he was led to look upon it as a chronic inflammation resulting from a greater or less degree of traumatism. Now that the presence of the tubercle bacilli furnished a definite basis for a diagnosis, he was trying to learn something about the occurrence of tubercle in these cases. Clinical experience had taught him, however, that whether these cases were tubercular or not, fresh air,

good food, and freedom from pain were the essentials for a cure.

Referring to the occurrence of ankylosis, he said that one single case of absolute, firm ankylosis of all the joints in the body was worth more to him than any number of experiments on dogs. In the case which he had reported in his paper there was no fever, no evidence of any nervous derangement; in fact, there was no constitutional disturbance. To supply a splint without traction is wrong; nothing makes better immobilization than plaster of Paris, and it is much more comfortable than the Thomas brace, yet it is insufficient without traction to overcome the reflex muscular contraction, and to relieve pain. The treatment which he advocated was the best possible one, no matter what the etiology of the disease.

DR. JOHN RIDLON exhibited a convenient pocket knife, with blades especially designed to facilitate the removal of plaster of Paris bandages.

In a paper read before the Allegheny County Medical Society Dr. Koenig took the ground that the consolidation of the lungs is an excessive effort of nature to repair the damage done to the tissue; and that the indication is to guide or restrain this function. He describes a case of acute croupous pneumonia, in a man of vigorous health, aged thirty-seven years.

The unusually severe pain was relieved by morphine and atropine hypodermically. "To divert the blood-stream and reduce the heart's action," he gave $\frac{1}{16}$ grain of apomorphine, and the following:

R.—Tinct. veratri viridis.....	gtt. 1.
Sodii salicylat.....	3ss.
Syr. senegae.....	3ij.
Aq. menthae pip.....	q. s. ad f 3ij.
M.—S. 3j every two hours.	

A previous rheumatic attack was considered in prescribing the salicylate. Six hours later he was sweating freely; pain lessened; pulse 98; temperature fallen $2\frac{1}{2}$ degrees, and cough relieved. The treatment was continued, in smaller doses, for three days; when potassium iodide was substituted. The patient sat up on the sixth day.

Dr. Rigg approved of the treatment, as that which should be followed in all but exceptional cases. He preferred aconite to veratrum as a sedative. Stimulants are harmful in the early stages.

Dr. Duff spoke favorably of salicylate of sodium, as he believed the condition in pneumonia to be analogous to that in rheumatism.

Dr. Daly considered veratrum a very useful controller of the heart. He laid great stress upon the proper time to discontinue this potent remedy; directing the nurse to lessen the doses when the pulse fell to 95. As to the salicylate, many acute pulmonary affections have their origin from the retention of broken-down products in the body. This may produce rheumatism, pneumonia, rheumatic bronchitis or rheumatic pleurisy; so that benefit may reasonably be expected from the salicylate. But it is necessary to know when to stop the remedy.

Dr. Borland urged the advisability of using the true salicylic, and combined it with sodium bicarbonate.

In closing the discussion, Dr. Koenig said he preferred veratrum because the drug contained two principles, an emetic and a cardiac sedative. If the dose of the sedative were too large, the emetic then acted, and rid the stomach of the surplus.

LEUCOCYTOSIS IN PNEUMONIA.—Dr. R. von Jaksch, in the *Centralbl. für Klin. Med.*, draws attention to the fact that the prognosis in cases of croupous pneumonia in which leucocytosis does not appear is very unfavorable. He thinks that in these instances it would be advisable to give by the mouth or hypodermically either pilocarpine, antipyrine, or nuclein, all of which, according to Horbaczewski, increase the number of white blood-corpuscles. Dr. von Jaksch is fully convinced that pilocarpine in croupous pneumonia actually increases the number of white corpuscles when a condition of leucocytosis already exists. For instance, in a patient suffering from pneumonia of the right base the number of white corpuscles was increased 62.7 per cent. an hour after the hypodermic injection of 0.005 milligramme of hydrochlorate of pilocarpine. This sudden increase was not due to the ingestion of food, as the patient during the time was kept without nourishment.—*Lancet.*

BRONCHO-PNEUMONIA FROM THE B. COLI COMMUNE.—Some five years ago Sevestre explained the occurrence of broncho-pneumonia in cases of enteritis in infants by the assumption of an infection from the intestine. His language is a little obscure, and it is not clear whether he meant a bacterial infection or a poisoning by chemical products formed in the intestine. While both modes of infection are probably true, the first at least has received a very positive confirmation at the hands of M. Lesage. At the request of Sevestre, Lesage investigated bacteriologically five cases presenting the requisite clinical features. In four cases there were patches of bronchopneumonia, one of which had suppurred. In the other case there was merely a pulmonary congestion. In every case the B. coli commune was found in the pneumonic patches and in the congested lung. Moreover the B. coli commune was the only micro-organism found in the pneumonic patches. In some conditions of enteritis this germ appears to acquire a virulence which it does not ordinarily possess, and when, under these circumstances it escapes from the intestinal canal, and is carried to distant organs, it seems capable of producing a wide variety of pathological conditions.

The study of this micro-organism is becoming more and more important, particularly with reference to infections in and about the intestines. It can hardly be doubted but that some of the obscurity now surrounding diseases of the right iliac region, and which it is the custom to-day to class in a rather comprehensive way under the title of appendicitis, will be cleared up when the natural history of this organism is more perfectly understood.

The controversy between Rodet and Roux on the one hand, and Chantemesse and Widal on the other, relating to the identity of this micro-organism with the Koch-Eberth bacillus, the alleged cause of typhoid fever, can hardly fail to be of the greatest service in leading to the truth.

These observations of Lesage indicate the possibility of other complications of enteritis in infancy being due to infection from migrated B. coli commune. A few weeks ago the pathological importance of this micro-organism was reviewed in these columns, and reference made to the wide variety of lesions in connection with which it had been found.

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PNEUMONIA.

DURING the year 1891, and the first two months of 1892, there were eighty-five articles published upon pneumonia, according to the *Index Medicus*. In the pages of our own journal, in the same period, there have appeared thirty-four papers, abstracts or notes concerning this disease. The most important matters noted are as follows:

Isdell¹ records two cases in which pneumonia followed injuries to the wall of the thorax; one a contusion, the other a strain.

Holt and Prudden (*Medical Record*) called attention to the rôle of the diplococcus pneumonie in the meningitis, endocarditis and other suppurative affections complicating pneumonia.

Fenwick (*Lancet*) speaks of the danger of cardiac insufficiency, and the two factors that produce it: the increased resistance to the propulsive action of the heart, and the progressive deterioration of its muscular substance; the former from the increased tension in the pulmonary circuit, and the latter from the high temperature.

Slifer² recorded a case in which the patient was treated by means of cardiac stimulants, until the symptoms became so alarming that these medications were stopped. Bleeding was performed three times, with immediate relief and eventual recovery.

Kahane³ records two remarkable cases of acute transitory oedema of the lung, occurring at the crisis of acute pneumonia in alcoholics, and ending in recovery.

T. G. Stephens⁴ advocates the use of veratrum viride.

Rossiter (*Medical Record*) describes four cases in which he succeeded in aborting acute pneumonia by the use of jaborandi.

S. Solis-Cohen⁵ adopts Richardson's suggestions

of nitrite of amyl and ammonium in the early stages, to reduce arterial tension, and keep the blood fluid, strychnine and quinine as tonics.

Epley (*Northwestern Lancet*) seeing in pneumonia "total suspension of vaso-motor control over the caliber of the small pulmonary vessels," administers ergot to abort the exudative process. He speaks enthusiastically of his success with this agent, given "fearlessly," in a "deliberate, conservative attempt to poison the patient with ergot."

Petrosco's treatment by digitalis has been quoted very extensively. He claimed that from 60 to 120 grains per diem were alone effectual. In some cases he gave 5 to 6 drachms of the leaves in five days. In 825 cases thus treated he claimed a mortality of but 2.06 per cent.

In Murphy's case of infantile pneumonia (*Lancet Clinic*), sedatives and stimulants had been given, and the child was at the last extremity; when digitalis was given, and the child at once recovered.

Hershey (*Medical News*) modified this method by giving the digitalis in hot infusion, adopting a suggestion of the writer's, first published in *The Medical World*, and which has been going the rounds of the medical journals since 1887. He treated 20 cases of pneumonia with the hot infusion, in doses of a tablespoonful every hour. Ten grains of calomel were given at the beginning of the treatment. All recovered promptly.

At a recent meeting of the Philadelphia County Medical Society, H. C. Wood spoke quite enthusiastically of digitalis in pneumonia.

On the other hand, Carhart (*Jour. Am. Med. Asso.*) condemns the digitalis treatment unequivocally in theory and in practice. He says that instead of relieving dyspnoea in the early stages, this drug increases this symptom; while the heart, already over-worked, is by it still further stimulated, at the same time that its work is being increased by the added tension of the blood-vessels. His preference is for veratrine, with morphine and atropine.

A. H. Smith also objects to digitalis, as in pneumonia the strain is on the right heart, and the indication is to dilate the heart and empty the veins into the arteries.

Jenckes (*Medical Record*) recommends calomel, followed by ethyl iodide inhalations; the latter as a germicide and as a palliative of the pulmonary symptoms. In grave cases, he uses alcohol freely, and nitrite of sodium, or nitro-glycerine. If these fail to relieve the embarrassed circulation, he resorts to venesection.

Fodor (*Blät. f. klin. Hydrotherapie*) values hydrotherapy highly in the croupous pneumonia of children.

Another writer in the *Medical Record*, A. A. Smith, recommends nitro-glycerine by the mouth, with strychnine and atropine hypodermically, as the most successful treatment of acute pulmonary oedema.

Brunton and Prickett (*Brit. Med. Jour.*) published a paper on the treatment of influenzal pneumonia by inhalations of oxygen and the administration of strychnine hypodermically. Gilchrist reported a case treated by the same agents, both these remedies

¹ British Medical Journal, November 8, 1890.

² Times and Register, March 14, 1891, p. 213.

³ Centralblatt für Klinische Med., November 10, 1891.

⁴ Times and Register, May 16, 1891, p. 404.

⁵ Ibid, June 27, 1891, p. 538.

being employed when collapse threatened. The relief was only temporary, as was that obtained later from leeches, and the patient died. But Collier and Symonds (*Lancet*) succeeded in saving a similar case by the continuous inhalation of oxygen, continued for three days, with caffeine hypodermically.

Couper Cripps (*Brit. Med. Jour.*) used strychnine hypodermically in a case of pneumonic coma, and the patient recovered.

Foy (*Dublin Jour. Med. Sci.*) also employed oxygen inhalations successfully in a critical case of the same nature.

Mary Putnam Jacobi reported a case of pleuro-pneumonia, in a child nineteen months old, treated with stimulants, cold packs and oxygen inhalations. It recovered, with empyema.

A writer in the *Hot Springs Medical Journal* recommends oil of turpentine, the use of which, he says, has "robbed the disease of all its horrors."

It will be seen that the two new methods of treatment are the digitalis, of Petresco, and the oxygen inhalations, of Brunton. The former seems likely to assume the position of the digitalis treatment of alcoholism—something every physician thinks he will try some time in a bad case that resists the regular treatment, but only here and there an occasional trial is made, and the treatment never becomes general. In ordinary, uncomplicated pneumonia, the digitalis is unnecessary; it is a question whether it may not be found the "missing link" in alcoholic pneumonia.

Oxygen promises to be a valuable remedy in pneumonic cyanosis and coma; and the hypodermic injection of strychnine is assuredly indicated in threatened heart failure. But neither should be elevated to the dignity of a routine practice. Wait until the heart failure is really threatened before interfering so rudely with the course of the disease.

On the whole, it seems that the profession is hopelessly at variance as to the treatment of this disease; and that as to the cardinal points of pathology, whether the morbid condition is one of circulatory tension or of relaxation, there is no consensus of opinion. Since such is the case, it seems to be the part of wisdom to abstain from active interference until it is clearly indicated; to use sedatives in cases requiring them, and stimulants when required; and depend on hygienic measures in the cases that require neither.

Annotations.

OUR SPECIAL NUMBERS.

BE it remembered once for all that in these special numbers we make no attempt to treat the subject exhaustively. We simply collect whatever good material we can obtain, and present it to you in this form. It may be that there is little that is new in these numbers; but as the material is from the pens of active practitioners and from the medical journals, each number gives a fair picture of the *current medical thought* on the subject discussed.

Next week we issue a number devoted to gynecological subjects, so far as the original department is concerned. This will contain the following original papers:

Operation for Parovarian Cyst, by Professor Goodell. (Clinical Lecture.)

Chronic Inflammation of the Uterus, with Mucous Polypi, by Prof. E. E. Montgomery. (Clinical Lecture.)

Changes in the Ovary as a Result of Menstruation and Gravity, by Mary A. Dixon-Jones. An important paper, the result of original research. Illustrated by twelve photo lithographs.

Symptoms, Diagnosis and Treatment of Chronic Endometritis, by Professor Henry J. Garrigues, M.D., of New York.

Contribution to the Literature of Cancer of the Uterus, by Professor H. J. Boldt, of the New York Post-Graduate School.

Several other papers have been promised for this number, of equal value; but we cannot announce them until they have been placed in our hands. This gynecological number will be issued on April 30.

The next special number will probably be that which treats of inebriety, which is nearly ready; but awaits the completion of a review of the medical literature of the past year on that subject. It is our desire to place in our readers' possession all the facts hitherto developed by the medical profession concerning the treatment of inebriety. This will enable them to judge whether there is any room for the unknown in the methods of the advertising quacks.

We are now unable to supply any copies of the "Scarlatina Number." The "Influenza" and "Diphtheria" numbers have been exhausted for some time. We order larger stocks of sample copies with each new issue; but the demand grows greater with each. We will endeavor to remedy this in future by printing larger editions for office use; and expect to issue another "Diphtheria Number" some time in the future.

The subjects concerning which we now desire communications from our readers are cholera infantum and the summer resorts. In regard to the former, we would suggest that any subscriber who has a question to ask, should send it to us, and answers will be given in the special number.

Letters to the Editor.

THE TREATMENT OF PNEUMONIA.

HAVING become so familiar with the violent initiatory symptoms of that scourge of the world, la grippe, I naturally look ahead to the probable development of pneumonic complications, and the very first treatment suggested is prophylactic.

To clean out the stomach and bowels a smart vegetable cathartic is given, and sometimes repeated. In many cases heart sedatives during the congestive stage, in small and frequent doses. At the first bed hour or sooner, 10 grains of Dover's and 10 grains of composition powder, in hot sweetened water, will go far toward aborting the disease. The pill containing acetanilide, quinine and cocaine has proved a most valuable combination in the first stage.

Throughout the whole course of pneumonia, after it has fully developed, I give the following:

R.—Tr. digitalis.....	3ij.
Vin. colchici sem.....	3ij.
Potassii carb. purif.....	gr. xv.
Morphinæ sulphat.....	gr. ij.
Syr. senegæ	2jss.
Mist. glycyrrh. comp.....q. s. ad f3iv.	

M—Sig. As indicated.

For the local treatment the nurse is directed to prepare a plaster or poultice, as follows:

R.—Capsicum pulv.....	ss. c.p.
Mustard grs	1 c.p.
Flaxseed grs.....	1 c.m.
Glycerine and water (hot)....	q. s.

M.—To be applied alternately to the chest walls and between the shoulder blades, as hot as can be borne. A piece of gauze should be applied next the skin. The glycerine will prevent the poultice from becoming hard, keep it warm, and prevent blistering. A poultice should never be cooked or boiled over a fire.

Whiskey should never be used in pneumonia.

Wine of beef and iron will do for children, while the bitter wine of iron will give tone and appetite to adults during convalescence. J. W. WADE, M.D.,

MILLVILLE, N. J.

PURGATIVES AND POSTURE IN PNEUMONIA.

WE hoped to be able to give our readers a paper upon pneumonia by Dr. Levick, knowing how valuable it would be, if he could transcribe to paper that matchless skill he displays in the sick-room. The recent death of his sister, however, has prevented him from doing any literary work at present. We quote from a personal letter (with the writer's permission) the following :

" Were I to write such a paper, there are two matters to which I should refer as of vital importance in the treatment of pneumonia.

" One is the importance of avoiding purgatives or even laxatives in the advanced stages of the disease. I think I have seen a fatal result from a dose of castor oil at such a time.

" The other is the absolute necessity that the patient *keep the recumbent position*, and not rise to the comode, even after convalescence may seem to have begun, perhaps even seem established. With the pulmonary circulation so seriously obstructed, as it is in genuine pneumonia, it is a struggle for the heart to act aright, and it requires either the early direct removal of this obstruction or, later, the conservation of all the heart's power to enable it thus to act. If then that power be unduly taxed by the patient assuming the erect position, the heart fails in its action, and death results, either immediately, or by the increased stasis in the lung.

" Even the strain in using the ordinary bed-pan is sometimes more than the patient can bear, and it is better to use a dust-pan covered with a towel should the bowels be moved, the urine having been first passed."

TREATMENT OF PNEUMONIA.

WHEN called to a case of pneumonia early, I give tr. aconite and fl. extr. gelsemium in full doses for the first day or two, and calomel sufficient to produce a free movement of the bowels. The calomel I usually continue in very small doses, say gr. 1-10 every 2 hours. I prescribe a capsule containing 2 grains each of quin. sulph. and antifebrin, one every 2 hours. After the second day I usually drop the aconite and gelsemium, or supersede it by gtt. $\frac{1}{4}$ tr. iodine, every hour or two. For the pain I use bags of bran as hot as can be borne, and where necessary, morphine sufficient to give the patient some sleep. The other drugs which I frequently use depending on the severity of the cough, strength of the patient, condition of the heart, etc., are mist. glycyrrh. co., syr. hypophos. co., carbonate of ammonia and digitalis. In the latter part of the disease, especially when expectoration is profuse, I frequently give :

R.—Syr. hypophos co.,	
Syrup hydroiodic acid.....	aa 3ss.
Every two hours.	

I believe in systematic feeding at intervals of 2 to 4 hours. Peptonized milk, Mosquera's beef meal or cocoa, etc.

You will observe that I have not mentioned any alcoholic stimulants. The administration of alcohol in some form was formerly routine practice with me. I had just lost a patient to whom alcohol had been given freely. Immediately following I had a case of typhoid-pneumonia. The patient was a delicate woman of forty-five years, whose stomach would not tolerate alcohol. Thinking her condition demanded it, I tried a bottle of maltine, with wine, pancreatin and pepsin, but she could not take it. So I was compelled to rely on other cardiac stimulants, and after a six weeks' siege she recovered. This patient having lived contrary to the expectations of all who saw her, and, notwithstanding the priest told her she would not live through the night, which, of course, made her give up all hope, I decided to try the same plan of treatment in other cases, and have been so successful, that I have no intention of returning to the old regime.

J. N. ROE.

1481 GATES AVENUE, BROOKLYN.

PNEUMONIA IN FRANKLIN COUNTY, PENNSYLVANIA.

THE following cases of pneumonia have presented themselves in my practice in the last few weeks; have been treated by me in the manner herein described, and all have recovered so far without any great difficulty. The first case was a man of healthy parentage, but himself of scrofulous diathesis; J. C., aged twenty-one years, book-keeper, has been ill for six months with sore mouth, and a rash that came on prior to the pneumonic attack. During these six months the eruption was accompanied by fever. The skin was red in color, having the appearance of an attack of scarlet fever.

Marked emaciation exists with clubbed nails; aspect pale; passages loose, but no diarrhea; has not observed any undigested food in discharge from the bowels; great irritability of stomach; hardly able to retain any food; tongue not coated, clean as normal; abdomen quite prominent, hot and tense; tympanites; enlarged mesenteric glands; no splenic or hepatic enlargement; examination of his lungs reveals considerable dullness on the left side posteriorly; this dullness is quite general; blowing bronchitic respirations left side post and anteriorly; coarse râles on the right side, but no consolidation apparent.

Diagnosis.—A scrofulous pneumonic affection; a similar disease of the mesenteric glands; during the attack of eruptive fever, pneumonia of the left lung was developed, and being unnoticed has led to the present state or condition. The following has been his treatment which has removed the trouble.

R.—Ung. iodi comp.....
To be rubbed on once daily over the abdomen.

R.—Ol. morrhuae.....
To be rubbed on abdomen twice daily.

R.—Syr. ferri iodidi,
Glycerini..... aa f3j.

M.—Sig. Teaspoonful three times a day.
Diet—Milk and the best brandy, beef tea, etc.

CASE II.—F. H., aged thirty; barber; catarrhal pneumonia; caught a cold six weeks ago, being pre-

viously well; commenced with coryza; cough, with mucous expectoration; chilliness at night, followed by night sweats; has lost eighteen pounds in weight since he was taken sick. No member of his family has had lung disease. There is a slight sense of resistance at the right apex anteriorly, and bronchophony under the right clavicle. The following treatment was given him:

R.—Liq. iodi comp..... gtt. v.
Sig. Thrice daily.

The front of the chest was also painted with iodine.

R.—Pulv. ipecac. comp..... gr. v.
Sig. At bedtime.

For cough I gave the following:

R.—Morphinæ sulphat..... gr. $\frac{1}{2}$.
Syr. pruni virg..... ml. xij.
Syr. scillæ..... ml. xx.
Sig. As needed.

CASE III.—Emma G., aged twenty-one years; occupation, seamstress; had been sick two weeks previous to my being called in to see her; coughing and spitting; temp. under tongue, 102.5° ; had had chill and fever; had a cough before she became sick; has a cough in the fall and winter every year, and this continues sometimes through the summer. Four days ago she had a chill, followed by fever; expectoration yellowish, not streaked with blood; pulse 112° , resp. 30° . The left side anteriorly is the clearest; also, the sound posteriorly on the right side is dull, particularly at the base. Very harsh respiration at the right apex, while posteriorly there are bronchial breathing, and increased vocal fremitus at the middle part of the right lung.

Diagnosis.—Acute pneumonia, superadded to some chronic trouble. I had her put to bed and placed on the following treatment:

A fly blister, followed by a flaxseed poultice, to the posterior part of her chest.

Internally, she was given:

R.—Quininæ sulph..... gr. j.
Digitalis pulv..... gr. $\frac{1}{2}$.
Potassæ nitrat gr. v.
Zingiberis pulv..... gr. j.
M. S.—Take every three hours, in pill.

R.—Pulv. ipecac. comp..... gr. v.
S.—Take in pill at night.

She has recovered entirely from the acute attack, and is now in much better health than usual at this season.

WILL EDGAR HOLLAND, M.D.

FAVETTIVILLE, PA.

Book Notices.

THE PRINCIPLES AND PRACTICE OF MEDICINE, Designed for the Use of Practitioners and Students of Medicine. By WILLIAM OSLER, M.D., Professor of Medicine in the Johns Hopkins University, etc. New York: D. Appleton & Co., 1892.

Dr. Osler's reputation would insure the success of a worse book than this. But the success of this work is not dependent on the author's reputation; for it is an excellent work. In the superiority of the pathological section it ranks with Flint; while the therapeutics is richer; though it is evident that the author is rather a pathologist than a practitioner. And is it not written that no man can serve two masters, and that no pathologist can become a good therapist? Nevertheless, the work is characterized throughout by such good sense and moderation, the descriptions

are so clear, with that freedom from obscurity that comes only from profound knowledge, that we know of no American work better fitted for the use of students.

His treatment of pneumonia is as follows: The disease can neither be aborted nor cut short, but runs a definite, self-limited course. In moderate cases the treatment is expectant; regulating bowels and diet, and giving a Dover's powder if necessary to procure sleep. For pain in chest, cupping, leeching, or better, a hypodermic of morphine. Bleeding is useful in some cases, if performed early. Later, to relieve pulmonary edema, it is a rational practice, but generally fails. Fever is not hurtful in itself; it may be beneficial; but high and prolonged fever is dangerous. The best antipyretic is cold; ice-bags to the chest, sponging, or baths, if brain symptoms be present.

He disapproves of quinine in bulky doses, preferring other antipyretics; and thinks the verdict of clinicians is adverse to the coal-tar products. Cardiac weakness may be in part due to the fever, much more to the toxic products of the disease, and to distension of the right heart. As an antitoxic he prefers alcohol; to be given "when the pulse becomes small, frequent and feeble, or very compressible, and when the heart-sounds, particularly the second pulmonic sound, begin to lose their force." Strychnine is one of the most valuable medicinal agents; as a cardiac tonic he gives $\frac{1}{10}$ to $\frac{1}{8}$ grain. The value of digitalis in the failing heart of fever is still uncertain. For signs of sudden or rapid heart-failure ether hypodermics sometimes do good. Aromatic ammonia is one of the best stimulants; camphor and musk are also mentioned. In gangrene following, it might be well to inject iodoform oil or bichloride into the lung tissue. As to the arterial sedatives, he prefers the lancet. Expectorants are rarely of value. For tardy resolutions, he employs pilocarpine. For the cough and pain, opiates; for marked cerebral symptoms, an ice-cap; for delirium, "careful watching," and the cold bath; for serious complications, nothing; pleurisy may require aspiration. Careful feeding is essential; milk, whey, broths, beef-juice and eggs. Cold drinks, soda water, etc., for thirst.

Not a word on infantile or aged, alcoholic, or hemorrhagic cases, gastro-intestinal complications, posture, early recognition of impending heart-failure.

The Medical Digest.

PARIAN METHODS OF TREATING PNEUMONIA.—Dr. Dujardin-Beaumetz, in a great many cases of pneumonia, uses no remedy whatever, interfering only when complications occur, such as weakness of the cardiac apparatus as the result of the previous infective disease or of alcoholism. In such instances he employs caffeine hypodermically, not approving of the alcoholic preparations, but regarding coffee, tea, and kola as useful. Against nervous symptoms and delirium he employs chloral, and in alcoholic patients paraldehyde in the dose of 45 grains, but he never uses opium under any circumstances. Blisters are never used by him in the acute stage of the disease. Professor Cornil recommends the use of an antiseptic mouth-wash, and when the local signs of pneumonia are great at the beginning of the disease, orders several wet cups, or resorts to venesection if the pulmonary congestion is severe. He then applies a large blister and gives a mixture as follows:

R.—Brandy or rum.....	3iss.
Simple syrup.....	3j.
Tincture of cinnamon.....	3j.
Distilled water.....	3ij.

A tablespoonful of this mixture should be taken as often as is necessary to strengthen the pulse. He also orders a little Dover's powder to increase perspiration. Professor Peter thinks that robust and plethoric patients demand the use of venesection and scarifying cups, while the weak and senile must receive cordials, such as the prescription just given, and the bilious must be treated by emetics, such as tartar emetic or antimonium sulphuret, in the dose of from 4 to 5 grains. Most other physicians agree in using as stimulants caffeine, ether, alcohol, and camphor. Digitalis is not much used, nor is hydrotherapy at all popular.—*Therapeutic Gazette*.

BRYONIA IN PNEUMONIA.—Mr. H. Rainsford (Kilburn) writes: W. W., aged thirty, when first seen on March 13, had complained of pain and coldness in back all the day previous, and had then a temperature of 102° —making this the second day of the disease. On the third day his temperature was 102.6° ; on the fourth day 103° , with profuse rusty sputum and marked crepitus over the right base; on the sixth day the lung was solid, no air entering the lower lobe on the right side; on the seventh day the crisis occurred, and the temperature fell from 102° to normal; on the eighth day moist râles were audible, and from that date the lung improved till the fourteenth day, when the patient was able to get up for an hour in the afternoon. The respirations never exceeded 36, nor did the temperature rise above 103° at any time, and delirium was nearly absent. On the tenth day a complication presented itself in the shape of a diphtheritic membrane covering the whole of the soft palate and uvula. This was scraped away, and the throat sprayed frequently with biniode of mercury (1 to 2,000), which effectually prevented the membrane reappearing or invading the larynx.

Now for the treatment: On the fourth day the patient was put on half-ounce doses of a mixture containing tr. bryoniae m xx and aqua 6 ounces. I may be wrong, but it seems to me that this drug materially modified the course of the disease, and prevented it from assuming its usual severity.—*B. M. Jour.*

STRYCHNINE IN THE PNEUMONIC CRISIS.—I had been attending for ten days a little girl, aged two years and eight months, who had pneumonia of the whole of the left lung, and some bronchitis about the upper part of the right. The temperature ranged between 102° and 103.5° F., and the whole aspect of the child pointed to a rapidly fatal termination. At my evening visit on the tenth day of the disease the temperature was 101.8° ; there had been a little diarrhea and sweating, and the child had taken its egg-flip badly during the day. I left, expecting to be called out that night, and I was at 1.30 A. M. I found the child cyanotic, cold, pulseless, and drawing every now and then a shallow breath. I opened the doors, quickly filled my syringe with liq. strychn., and injected $1\frac{1}{2}$ min., with the result that the breathing became deeper and more frequent, the pulse returned, and the cyanosis became less. I rolled the limbs and head up in cotton-wool, and applied hot-water bottles, and asked for some brandy and milk. A fresh bottle having to be opened there was some delay, and I bent over the cot

to listen for the breathing; it had quite ceased though the pulse was beating. I immediately injected 2 minims more of strychnine; the child drew a deep breath, opened its mouth wide, showing a livid tongue, and remained for some two or three seconds in this position; then the mouth closed, and she breathed regularly and deeply, and took some brandy (3ij) and milk (3iv).

The next day her temperature was normal; she had 4 minims of liq. strychn. t. d. s. in place of an ammonia and bark mixture, and alternately with mixture containing perchloride of iron. That night I left 12 minims with the mother, diluted with three teaspoonsful of water, with directions to give one or two teaspoonsful if the child became livid. At 11 P. M., the child looking blue about the eyelids and sides of the nose, the mother gave one teaspoonful and opened the doors; the lividity passed off, and now, a week later, the child's temperature has been daily normal; both lungs are practically clear, and it is sitting up in bed playing with its toys, but exceedingly feverish.—John S. Edye, *B. M. Jour.*

PATHOLOGY OF PNEUMONIA.—The general stimulant treatment of pneumonia, now almost universally adopted, hardly differs essentially from the treatment of the continued fevers, and is obviously adapted rather to the theory that pneumonia is a "specific" disease than to the belief that it is a local inflammation. On the other hand, local applications to the chest in the form of poultices, ice-bags, etc., have enjoyed much favor, and have been believed by some authorities to influence the progress of the disease. Stimulating expectorants, again, generally play a considerable part in the therapeutics of pneumonia. Summing up the subject, Wilson Fox wrote: "The theory of a 'specific' cause can scarcely be maintained for pneumonia in the same sense as that in which the term is employed for the contagious pyrexial diseases. The causes of pneumonia are manifold, and the disease may originate under such diverse conditions that it seems impossible to attribute it to any single blood poison. On the other hand, the most probable hypothesis to explain its origin is that of an altered composition of, or the existence of some morbid material in, the blood, which, from its special qualities, may affect a particular organ, or, as is more probable, may, under local predisposing causes, excite inflammation in that part of the system which in any given individual is the most liable to suffer, as a *locus minoris resistentiae*." We have no knowledge of the nature of the changes in the blood that predispose to pneumonia. The excess of fibrine that has been described has been shown by Virchow to be the consequence, rather than the cause, of the pulmonary inflammation. In some cases, no doubt, pneumonia is due to septicaemia, but this is not at all probable of the typical acute disease.

It is rather a curious circumstance that while theoretical considerations and clinical evidence seem at present inadequate to fix definitely the pathological relations of pneumonia, the response of pathology and bacteriology is also somewhat equivocal. It is true that the researches of the bacteriologist of late years have considerably advanced our knowledge of this part of the subject. From them we learn that the microbe most constantly present in pneumonic exudation, and in that of the inflammatory affections with which pneumonia is often complicated, is the diplococcus discovered by Fraenkel and Weichselbaum; whereas Friedländer's bacillus, like some other microbes occasionally found in pneumonia, is of ex-

ceptional occurrence. Nor must the remarkable investigation of the two Klemperers upon the toxines of the first-named organism be lost sight of, as affording additional proof of the specificity of the disease. Nevertheless, when all these contributions to knowledge are collated, it would still seem that much remains to be done before we are in a position to conclude that bacteriology has said its last word regarding pneumonia.—*Lancet*.

PROF. NORTON (*Lancet*) speaking of calculi, says: In stone of the bladder the pain is always present, referred to perineum and along penis, is always worse after passing water, because the stone is then grasped by the bladder, and after exertion or carriage driving, because of the jolting of the stone against the trigone of the bladder.

In stone of the kidney pain is very variable. I have known instances of stone in kidney fixed in position to produce no pain at all. A large stone in the pelvis of the kidney produces pain in the loin of the same side, and is increased by lifting weights, whilst a stone which has a small end and is from time to time grasped in the entrance of the ureter, produces intense pain in the loin, extending to the testicle of the same side, and often accompanied by high temperature.

BACILLUS DIPHTHERIAE.—I do not intend to go fully into the history of the diphtheria bacillus. Suf suffice it to say it was first recognized by Klebs, first isolated in pure growth by Löffler, and that Roux and Yersin were the first to show that when introduced into the circulation of a rabbit this bacillus produced a paralysis which is progressive, and which is, from the description given, of the same nature as that I have already brought before you. Roux and Yersin's results were confirmed by Briege and Fraenkel. All observers are agreed that the bacillus diphtheriae is limited to the superficial layers of the membrane, and does not distribute itself over the body. It is not found in the blood or in any of the organs. Similarly, even when subcutaneously inoculated, although it kills the animal, yet its growth is limited to the site of inoculation. This fact, taken with that established by the brilliant researches of Roux and Yersin—namely, that the bacillus produces paralysis—is a very powerful argument that the bacillus diphtheriae is the *vera causa*, the living contagion, or, as I prefer to call it, the primary infective agent in diphtheria.—Dr. Sydney Martin, in *Lancet*.

BENEFITS OF MARRIAGE.—The result of Bertillon's statistics is to show that the conjugal association, provided it is not prematurely entered on, is salutary to both sexes, though it is the husband who benefits most from the union. The dangers of child-bearing neutralize its benefits to the female up to the age of twenty-five in France, and in Belgium and Holland even up to the ages of forty or forty-five. "The comparison," he says, "of the vitality of married women and widows above the age of fifty with that of spinsters is very significant. It shows that the dangers of maternity are prolonged beyond that time of life. A woman who, by her celibacy, has deprived her organs of their special function, who has denied to her youth the pleasures of love, and the labors and joys of motherhood, has not thereby insured her old age against the dangers peculiar to it, but, on the contrary, she remains more exposed to them. Love and motherhood, in the salutary conditions of mar-

riage, far from exhausting vitality, preserve and protect it in the present and in the future, because in France, the mothers of families, wives or widows, at every period of their existence after the age of twenty-five, pay a smaller tribute to death than the spinsters of corresponding age."

—Prof. Simpson, *Med. Press and Cir.*

GERMAN NOTES.

HERMAN D. MARCUS, M.D.,
Resident Physician at the Philadelphia Hospital.

IMMUNITY AGAINST AND CURE FOR PNEUMOCOCCI INFECTION.—Drs. G. and F. Klemperer publish the following in relation to the above subject:

They succeeded in rendering rabbits immune against pneumonia, using both sputum expectorated before and after the crisis; The former had to be heated to remove its toxicity. Glycerine extracts of pneumococci exerted also immunity if previously heated at 140°. Bouillon cultures conferred immunity after a certain time and under certain conditions, thus it was found that after subcutaneous injection about fourteen days elapsed before immunity; direct intra-venous injection caused immunity in three or four days.

According to their experiments every nutritive solution in which pneumococci have developed confers immunity against pneumococci septicæmia, even though the coccæ have been removed. By exposing the toxic nutritive solution to a high temperature, the effect may be hastened and heightened.

The fluids causing immunity cannot cure the animal, nor can they, if given at the same time with the causation of the infection, prevent the occurrence of the disease. On the other hand, the authors succeeded in effecting cures by the serum of immune animals in accordance with the method of Behring and Kitasato for diphtheria and tetanus. This serum can cure pneumococci septicæmia, especially if introduced directly into the blood-current. The healing serum of immune rabbits is also able to cause immunity.

Cure is due to a fluid derived from the organism of an immune animal. This immunity being the result of the incorporation of the products of tissue change of the pneumococci, a direct course, thus leading from the exciting cause of the disease to immunity, and from this to the cure of the disease.

If, then, it should be asked in what manner the blood serum cures pneumococci septicæmia, the experiments will show firstly, that the serum does not destroy the coccæ, but that the serum neutralizes the toxicity of the toxic products formed by the pneumococci; thus, the healing serum renders harmless the poisonous material which had formed the pneumococci. If, then, the coccæ continue to produce poison, this would be rendered harmless in the moment of its formation, as long as such serum is present.

In such an organism, which is protected and freed from poison, the poisonless bacteria must succumb, just the same as now. Pathogenic bacteria are destroyed when injected into the circulation of healthy animals; a work which is principally performed by the white blood corpuscles.

The authors succeeded in producing a toxalbumin in nutritive fluids, in which pneumococci have grown, the pneumotoxin. This albuminous body, generated by the pneumococcus, causes, after introducing into the animal organism, after a few days, the formation of a substance which has the power to destroy the

poison formed by the pneumococcus (anti-pneumotoxin). This substance possesses, in the opinions of the authors, curative properties against pneumococci infection, being produced in the pneumonia of both rabbits and man. The authors therefore consider the etiological identity of both affections proven, showing on the one hand that the serum taken after the crisis from patients suffering from pneumonia is curative against pneumococcus infection of rabbits; on the other hand, serum of immune rabbits, injected into men having pneumonia, caused always a large decrease in temperature.

The authors have also demonstrated by experiments on themselves and others that the serum acts totally indifferently in the healthy.

—Berl. Klinische Wochenschrift.

HYDROTHERAPIE IN CROUPOUS PNEUMONIA IN CHILDREN.—Dr. Julius Fodor reports following case: An eight-month-old child became suddenly convulsive; this condition was disregarded and thought to be due to teething. Two days later the child had a cough with difficult breathing, vomiting, insomnia, and general restlessness. Examination proved croupous pneumonia of right apex.

Fodor ordered a bath ($81\frac{1}{2}^{\circ}$) morning and evening, of five minutes' duration, with subsequent packing and covering up for one-half hour, then damp and cold bandages over the trunk, which were changed half hourly if high temperature, otherwise hourly. Steamed compresses were applied to the cold feet. (These are prepared by dipping compresses into hot water, then superficially wrung out and wrapped in a flannel cloth.)

Soon after beginning this treatment the child improved. The vomiting stopped; sleep improved; pulse became regular, and the expectoration became free, without the use of expectorants. The fever was always kept in bounds by using baths and compresses; critical decrease of temperature and perspiration appeared on the seventh day. After crisis baths were employed only once daily, and the bandages were renewed every two or three hours. The infiltration disappeared in a few days and the catarrh was soon cured.—*Blaetter f. d. Klin. Hydrotherapie.*

ANTIPYRETIC TREATMENT OF CROUPOUS PNEUMONIA IN CHILDREN.—**I.** Antipyretic remedies may only then be employed in children if by reducing the temperature the cardiac muscle is not weakened.

2. Antipyretic remedies which are dangerous to the heart muscle should not be employed.

3. Whenever antipyretics are employed it is well to prepare for the administration of cardiac stimulants.

Cautious use of antipyretics is, therefore, recommended in pneumonia. The best antipyretic is cold water in the form of compresses, packings in rare instances, cold baths, but most frequently lukewarm baths. Internal antipyretics are only rarely used.

—Dr. A. Baginsky, in *Arch. f. Kinderheilkunde*.

BACTERIOLOGY OF PNEUMONIA IN CHILDREN.—Dr. Neuman has found that the Fraenkel-Weichselbaum's pneumococcus is generally the cause of croupous pneumonia, and may be also found in the greatest number of catarrhal pneumonias. To get the sputum from children, Neuman introduces into the entrance to the glottis, through the mouth, a pincette covered by sterilized cotton; by touching the epiglottis coughing is excited, and the sputum is thrown from the upper air passages against the cotton. The cotton is then washed out in bouillon, which may be then used for examination.—*Jahrbuch fuer Kinderheilkunde*.

Loewenthal (Vienna) in speaking of pneumonia says that his experience showed that large doses of digitalis are rather injurious. He found the condition of the patient worse. The lassitude and malaise were increased; cerebral symptoms, such as delirium and somnolence were not improved. The local symptoms remained either the same or became more extended. The fever did not decrease. The frequency of the pulse and the blood pressure were abnormally reduced, arrhythmic of the pulse was very often observed.

—Centralblatt f. d. ges. Therapie.

Medical News and Miscellany.

**THE German Hospital people are collecting funds
for a Children's Hospital at Jerusalem.**

DR. A. M. CHURCH, of Logansport, Indiana, who was waylaid and sandbagged April 1, died of his injuries April 18.

VAN DEN CORPUT affirms that the antipyretics, salicylic acid, quinine, menthol and carbolic acid, produce a diminution of the sexual powers in both sexes.

DR. JEROME K. BAUDUY, of St. Louis, is to deliver the Alumni Oration at Jefferson College on April 25. In the evening of the same day a dinner will be given at the Hotel Stratford.

A HOT SPRINGS doctor has a quart jar filled with the remnants of circumcision, and labeled "Clipping from the *Arkansaw Traveller*."

—Hot Springs Medical Journal.

TO WHAT BASE USES VILE.—The Massachusetts House at our Centennial Exposition was removed to Lexington, Mass., and occupied as a hotel. It has now been transformed into a Keeley Hospital to relieve Massachusetts inebriates of their surplus gold.

WEEKLY Report of Interments in Philadelphia,
from April 9 to April 16, 1892:

CAUSES OF DEATH.		CAUSES OF DEATH.		
	Adults.	Minors.	Adults.	
Abscess	3		Hemorrhage	3
Aneurism of the aorta	1		Inanition	3
Alcoholism	1		Influenza	7
Apoplexia	4		Inflammation, bladder	1
Asphyxia	1		" brain	5
Anæmia	1	1	" bronchi	9
Bright's disease	9		" kidneys	4
Burns and scalds	3		" larynx	1
Cancer	14		" liver	1
Casualties	7	3	" lungs	23
Congestion of the brain	1	6	" pericardium	18
" " lungs	2	2	" peritoneum	1
Cholera infantum	6		" pleura	2
Cirrhosis of the liver	4		" s. & bowels	4
Consumption of the lungs	55	7	" spine	5
" " bowels	1		Locomotor ataxia	1
Collapse of lungs	1		Malformation	2
Convulsions	14		Märsasmus	10
" puerperal	1		Measles	3
Croup	7		Neuralgia of the heart	1
Cyanosis	5		Obstruction of the bowels	2
Debility	4		Old age	13
Diabetes	4		Paralysis	9
Diarrœa	2		Pyæmia	1
Diphtheria	17		Rheumatism	4
Disease of the heart	28		Rupture of the uterus	1
" liver	1		Sepsis	1
Drowned	5		Septicæmia	3
Dropsey			Softening of the brain	3
Effusion of the brain	1		Suffocation	1
Erysipelas	1	1	Suicide, cutting throat	1
Fatty degeneration of the heart	3		" shooting	1
Fever, puerperal	1		Syphilis	1
" scarlet	2		Tubes mesenterica	1
" typhoid	6		Teething	1
Gall stone	9	4	Tumor	1
Gangrene	2		Uæmia	5
			Total	276

A COLUMBIAN reception and musicale was given at the Mansion House, Atlantic City, on April 18, for the benefit of the proposed hospital in that city. Governor Abbott and Mrs. Endicott led the grand march. The reception was a success and a handsome sum was realized.

E. D. CAMPBELL, Professor of Qualitative Analysis, in the University of Michigan, met with an accident on April 12, that deprives him of his eyesight. While he was at work in the chemical laboratory over a glass receiver containing hydrogen and oxygen the gas exploded. Bits of glass cut into his eyes, inflicting severe injuries. His eyes were removed by the surgeons at the university hospital the same evening.

THE first number of *The Philadelphia Polyclinic* has appeared. It is a quarterly of sixty pages, without advertisements, and filled with material supplied exclusively by the faculty of the school issuing the journal. The idea is commendable, and we trust the new journal will receive such support as will warrant its continued appearance in the same form. The truth is, medical advertising does not pay. It is worth more to the journal to devote its pages to its readers than to sell them to the advertisers.

DR. FRANK C. FERGUSON has disposed of the *Indiana Medical Journal* to a stock company composed of forty Indiana physicians. Drs. Brayton and Potter assume the editorship, and Dr. E. S. Elder is the general manager. This is a good arrangement all around. No one man should monopolize a journal published for a profession, and no one should attempt to be editor and business manager. Such an arrangement is sure to result in disaster to the enterprise or to the man who is unwise enough to take upon himself such a load. We trust that our Indiana friends will give us a journal that will be representative of the best interests in Indiana medicine.

CHICAGO, which depends on mercantile houses for its medical literature, appears likely to leave to the same parties the duty of caring for her guests at the coming Exposition. Messrs. Truax, Green & Company, announce that they will open a "Physicians' Bureau of Service and Information," at which visiting physicians can register and obtain lists of hotels, etc., telegraphic and postal facilities, banking, livery; and, in fact, all the attentions that facilitate the business of a stranger in a crowded city. We cannot but admire the enterprise that prompts this action, which will entail an enormous amount of trouble and expense on the firm, and we trust they will reap a commensurate profit from the relations thus made with the visiting physicians.

IT has been suggested that the roads adjacent to the Exposition Buildings be utilized to form an exhibit of roads and road-making machinery: this material at present being scattered through five separate buildings. The greatest nations in all ages have been the greatest road-makers; witness the Romans, the Peruvian Incas, and the modern English. We have taught the world the possibilities of the modern road, the railway, as a conqueror, settler, and civilizer of new countries; but have skipped the preliminary grades. Our wagon roads scarcely deserve the name; in general, neither they nor the Eastern city streets can compare with those of Europe. The subject is of much importance, and any movement towards securing a better condition of our roads will have the support of the medical profession.

PNEUMONIA was discussed at the last meeting of the Lehigh Valley Medical Association. It was evident that the lancet has not been given up by our country members, who cling stubbornly to their old-time remedies, and wait till the pendulum of medical opinion swings back to them.

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Changes in the Medical Corps of the U. S. Navy for the week ending April 16, 1892.

DIXON, W. S., Surgeon. Ordered to the Smithsonian Institution.

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